



Configuration Guide

International Configuration Guide

This configuration guide provides international configuration support for the NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products. It describes how to configure the system country, the system clock time zone, the Simple Network Time Protocol (SNTP) server, analog voice trunk disconnect supervision, the dial plan, accept and reject numbers, and E1 interfaces using both the ADTRAN Operating System (AOS) command line interface (CLI) and Web-based graphical user interface (GUI).

This guide consists of the following sections:

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International Configuration Overview

By default, NetVanta voice products comply with United States standards; however, NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products running AOS firmware versions A4.05 and later can readily be adapted to comply with other country standards. Multiple system settings can be configured simultaneously by changing the system country. These settings include the coder-decoder (CODEC) companding type, foreign exchange station (FXS) ringing frequency and cadence, FXS/FXO impedance, and the default CODEC country. Changing the system country also affects other system settings, such as the default language for the voice prompts and the system email. Additionally, the system clock time zone, SNTP server, dial plan, and accept and reject numbers can be manually configured to match the conventions of the country in which the unit is operating. Analog voice trunks can also be adapted for auto attendant, modem, and fax applications in countries where a busy tone is used to indicate that a call has ended. In these countries, disconnect supervision for busy tone can be configured on analog voice trunks to monitor foreign exchange office (FXO) ports connected to the trunk. This ensures that calls are not maintained indefinitely in auto attendant, modem, and fax applications.

Hardware and Software Requirements and Limitations

Disconnect supervision for busy tone is only supported on NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products running AOS firmware versions A4.05 and later. When using disconnect supervision, the busy tone is detected within approximately 10 percent of the specified frequency and cadence. Disconnect supervision is only available for loop start and ground start analog voice trunks.

NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products cannot be configured to generate tones of one country type and detect tones of a different country type.

International Configuration Using the CLI

All AOS features that apply to international configurations can be configured using the CLI. While many international features can be configured using the GUI, some features, including the startup configuration, the system country, disconnect supervision for busy tone, always-permitted dial plan patterns, and named digit timeouts, can only be configured using the CLI. For information on the features that can be configured using the GUI, refer to [International Configuration Using the GUI on page 21](#).

Accessing the CLI

To access the CLI on your AOS unit, follow these steps:

1. Boot up the unit.
2. Telnet to the unit (**telnet** <ip address>). For example:

telnet 208.61.209.1.



If during the unit's setup process you have changed the default Internet Protocol (IP) address (10.10.10.1), use the configured IP address.

3. Enter your user name and password at the prompt.



*The AOS default user name is **admin** and the default password is **password**. If your product no longer has the default user name and password, contact your system administrator for the appropriate user name and password.*

4. Enter the Enable mode by entering **enable** at the prompt as follows:

>enable

5. Enter your Enable mode password at the prompt.
6. Enter the unit's Global Configuration mode as follows:

#configure terminal
(config)#

Creating a Blank Startup Configuration Using the CLI

It is recommended that a blank startup configuration be created for the NetVanta 6355, NetVanta 7060, and NetVanta 7100 before configuring the system because the system automatically generates default integrated services digital network (ISDN) number templates, dial plan entries, and accept and reject numbers that may not apply to your country. Creating a blank startup configuration removes any existing number templates so that they can be manually defined for the country in which the unit is operating. To create a blank startup configuration, follow these steps:

1. From the Enable mode prompt, enter the following:

#copy console flash startup-config force-overwrite

2. The following text will be displayed:

Enter text to be saved to "startup-config".

Type CTRL+D to finish.

On your keyboard, simultaneously press the **Ctrl** and **D** keys.

3. Reload the unit using the following command:

#reload

4. The following prompt will appear:

Save System Configuration?[y/n]

5. Enter **n** to reboot the system without saving the system configuration.

Configuring the System Country Using the CLI

To configure the NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products for operation in a specific country, changes are made to the system country setting. Once the system country is set, several default settings will automatically change to match the standards of the specified country. These settings include the CODEC companding type, FXS ringing frequency and cadence, FXS/FXO impedance, and the default CODEC country. Changing the system country also affects other system settings, such as the default language for the voice prompts and the system email.

The system country setting is not stored as part of the running configuration or the startup configuration; therefore, erasing the startup configuration will not change the system country. Also, if a particular feature or configuration option is set to something other than the default, changing the system country will have no effect on that feature or option.



The system country can only be configured using the CLI.

The following tables show some of the FXO and FXS parameters and other system parameters affected by the system country setting. [Table 1 below](#) includes a comprehensive list of features affected by the system country and CODEC country settings. Because changing the system country also changes the default CODEC country (if the CODEC country has not been previously changed), setting the system country affects all features in both the **System Country** and **CODEC Country** columns. [Table 2 on page 5](#) shows the default settings of several parameters affected by the system country setting. [Table 3 on page 6](#) lists general system parameters that are affected by the system country setting.

Table 1. Features Affected by System Country and CODEC Country Settings

System Country	CODEC Country
NetVanta 6310 PRI 0/1 Compatibility (T1 or E1)	Dial Tone
Default Voice Prompt Language	Busy Tone
Default System Email Language	Fast Busy Tone
Default CODEC Country	Ringing Parameters
Default CODEC Companding Type	SAS Tone
Default Caller ID Type	CAS Tone
Default FXO/FXS Impedance	Test Tone
Release Tone Detection	Stutter Dial Tone
Dial Tone Detection	Confirmation Tone

Table 1. Features Affected by System Country and CODEC Country Settings (Continued)

System Country	CODEC Country
FXS Ring Frequency	Howler Tone
Default Country Code	Call Waiting Tone
Default International Dialing Prefix	Ring Cadence
Maximum Frequency-Shift Keying (FSK) Based Caller ID Name Length	

Table 2. Default Parameters

System Country	CODEC Country	CODEC Companding	Country Code	International Dialing Prefix	Impedance	NetVanta 6310 PRI 0/1 Compatibility
Australia	Australia	A-law	61	0011	Z1 (Rs 220 Ω , Rp 820 Ω , Cp 115 nF)	E1
Belgium	Belgium	A-law	32	00	600 Ω real	E1
Canada	Canada	μ -law	1	011	600 Ω complex	T1
ETSI	ETSI	A-law	N/A	N/A	Z2 (Rs 270 Ω , Rp 750 Ω , Cp 150 nF)	E1
Ireland	Ireland	A-law	353	00	Z2 (Rs 270 Ω , Rp 750 Ω , Cp 150 nF)	E1
Mexico	Mexico	A-law	52	00	Z1 (Rs 220 Ω , Rp 820 Ω , Cp 115 nF)	E1
Puerto_Rico	Puerto_Rico	μ -law	1	011	600 Ω complex	T1
United_Arab_Emirates	United_Arab_Emirates	A-law	971	00	600 Ω real	E1
United_Kingdom	United_Kingdom	A-law	44	00	Z4 (Rs 320 Ω , Rp 1050 Ω , Cp 230 nF)	E1
United_States	United_States	μ -law	1	011	600 Ω complex	T1

Table 3. General System Parameters

System Country	Default GUI Language	Default Voice Prompt Language	Default Email Language
Australia	English	English	English
Belgium	English	Canadian French	Canadian French
Canada	English	English	English
ETSI	English	English	English
Ireland	English	English	English
Mexico	English	Spanish	Spanish
Puerto_Rico	English	Spanish	Spanish
United_Arab_Emirates	English	English	English
United_Kingdom	English	UK English	English
United_States	English	English	English

Use the **voice system-country** command from the Global Configuration mode to configure the system country for your unit. To configure your unit's system country, follow these steps:

1. From the Global Configuration mode prompt, enter the following:

```
(config)#voice system-country <country>
```

The <country> variable specifies the default settings for several parameters. To view a full list of the countries supported, enter the command followed by a question mark. For example:

```
(config)#voice system-country ?
```

2. After entering the **voice system-country** command, you will be prompted with the following:

WARNING! Any unsaved configuration will be lost.

Save system-country setting and continue with reboot? [y/n]

Enter **y** to save the system country settings and continue with the system reboot. Enter **n** to abort the operation and return to the Enable mode prompt.

The following example configures the default settings for Australian compliance:

```
>enable
#configure terminal
(config)#voice system-country Australia
```

Configuring the Ring Frequency Using the CLI

In most circumstances, setting the system country will automatically configure the appropriate FXS port ring frequency for the specified country. However, the FXS port ring frequency can be manually changed from the default system country setting if necessary. The table below shows the default ring frequencies for supported countries:

Country	Default Ring Frequency (Hz)
Australia	25
Belgium	25
Canada	20
ETSI	25
Ireland	25
Mexico	25
Puerto Rico	20
United Arab Emirates	25
United Kingdom	25
United States	20

Use the **ring-frequency** command to change the ring frequency of a single FXS port from the default system country value. From the FXS interface configuration mode, enter the command as follows:

```
(config-fxs slot/port)#ring-frequency <value>
```

The *<value>* variable specifies the FXS port ring frequency. Valid values are **20**, **25**, and **50** Hz

The following example configures the ring frequency for FXS port 2/1 as **25** Hz.

```
(config)#interface fxs 2/1  
(config-fxs 2/1)#ring-frequency 25
```

Use the **ring-frequency** command to change the ring frequency of a range of FXS ports from the default system country value. From the FXS interface range configuration mode, enter the command as follows:

```
(config-fxs slot/port-port)#ring-frequency <value>
```

The *<value>* variable specifies the FXS port ring frequency. Valid values are **20**, **25**, and **50** Hz

The following example configures the ring frequency for FXS ports 2/1 through 2/4 as **25** Hz.

```
(config)#interface range fxs 2/1-4  
(config-fxs 2/1-4)#ring-frequency 25
```

Configuring the Loop Disconnect Time Using the CLI

Loop disconnect time is the length of time a line must maintain a loop current feed open (LCFO) state to qualify as a valid disconnection. In most circumstances, setting the system country will automatically configure the appropriate loop disconnect time for FXO trunks for the specified country. However, the loop disconnect time for loop-start and ground-start FXO trunks can be manually changed from the default system country setting if necessary. The table below shows the default loop disconnect time for supported countries:

Country	Loop Disconnect Time (ms)
Australia	500
Belgium	200
Canada	500
ETSI	200
Ireland	200
Mexico	500
Puerto Rico	500
United Arab Emirates	200
United Kingdom	200
United States	500

Use the **loop-disconnect time** command to change the time period that qualifies as a valid loop disconnection on a specified FXO trunk. From the Voice Analog Trunk LS Configuration or Voice Analog Trunk GS Configuration mode, enter the command as follows:

```
(config-TRUNK)#loop-disconnect time <value>
```

The *<value>* variable specifies the loop disconnect time in milliseconds. Valid range is **50** to **1000** milliseconds.

The following example configures the loop disconnect time for loop-start FXO trunk T01 as **500** ms.

```
(config)#voice trunk t01 type analog supervision loop-start  
(config-t01)#loop-disconnect time 500
```


Configuring the Clock Time Zone Using the CLI

The system clock time zone should be set to the geographic time zone in which the unit is operating. This setting is based on the difference in time (in hours) between Greenwich Mean Time (GMT) and the time zone for which you are setting up the unit. For instructions on how to set the time zone using the GUI, refer to [Configuring the Clock Time Zone and SNTP Server Using the GUI on page 22](#).

Use the **clock timezone** command from the Enable mode prompt to set the unit's internal clock to the time zone of your choice. The list below shows the valid commands used to configure the system clock time zone.

clock timezone +1-Amsterdam	clock timezone +4-Abu-Dhabi	clock timezone -10
clock timezone +1-Belgrade	clock timezone +4-Baku	clock timezone -11
clock timezone +1-Brussels	clock timezone +4:30	clock timezone -12
clock timezone +1-Sarajevo	clock timezone +5-Ekaterinburg	clock timezone -2
clock timezone +1-West-Africa	clock timezone +5-Islamabad	clock timezone -3-Brasilia
clock timezone +10-Brisbane	clock timezone +5:30	clock timezone -3-Buenos-Aires
clock timezone +10-Canberra	clock timezone +5:45	clock timezone -3-Greenland
clock timezone +10-Guam	clock timezone +6-Almaty	clock timezone -3:30
clock timezone +10-Hobart	clock timezone +6-Astana	clock timezone -4-Atlantic-Time
clock timezone +10-Vladivostok	clock timezone +6-Sri-Jay	clock timezone -4-Caracus
clock timezone +11	clock timezone +6:30	clock timezone -4-Santiago
clock timezone +12-Auckland	clock timezone +7-Bangkok	clock timezone -5
clock timezone +12-Fiji	clock timezone +7-Kranoyarsk	clock timezone -5-Bogota
clock timezone +13	clock timezone +8-Beijing	clock timezone -5-Eastern-Time
clock timezone +2-Athens	clock timezone +8-Irkutsk	clock timezone -6-Central-America
clock timezone +2-Bucharest	clock timezone +8-Kuala-Lumpur	clock timezone -6-Central-Time
clock timezone +2-Cairo	clock timezone +8-Perth	clock timezone -6-Mexico-City
clock timezone +2-Harare	clock timezone +8-Taipei	clock timezone -6-Saskatchewan
clock timezone +2-Helsinki	clock timezone +9-Osaka	clock timezone -7-Arizona
clock timezone +2-Jerusalem	clock timezone +9-Seoul	clock timezone -7-Mountain-Time
clock timezone +3-Baghdad	clock timezone +9-Yakutsk	clock timezone -8
clock timezone +3-Kuwait	clock timezone +9:30-Adelaide	clock timezone -9
clock timezone +3-Moscow	clock timezone +9:30-Darwin	clock timezone 0
clock timezone +3-Nairobi	clock timezone -1-Azores	clock timezone GMT-Casablanca
clock timezone +3:30	clock timezone -1-Cape-Verde	clock timezone GMT-Dublin

The following example sets the time zone for Auckland, New Zealand.

```
>enable
#clock timezone +12-Auckland
```

Configuring the SNTP Server Using the CLI

Use the **sntp server** command to set the host name of the SNTP server, as well as the version of SNTP to use. SNTP is an abbreviated version of the Network Time Protocol (NTP). SNTP is used to set the time of the AOS product over a network. The SNTP server usually provides the time to many devices within a network. For instructions on configuring dial plans using the GUI, refer to [Configuring the Clock Time Zone and SNTP Server Using the GUI on page 22](#).

To configure the SNTP server using the CLI, follow these steps:

1. From the Global Configuration mode prompt, enter the **sntp server** as follows:

```
(config)#sntp server <hostname> | <ip address> [version <number>]
```

The *<hostname>* variable specifies the host name of the SNTP server.

The *<ip address>* variable specifies the IP address of the SNTP server. The IP addresses should be expressed in dotted decimal notation (for example, **10.10.10.1**).

The optional **version <number>** variable specifies which NTP version is used. The valid range is **1** to **3**.

2. Use the **sntp wait-time** command at the Global Configuration mode prompt to set the time between updates from the SNTP server:

```
(config)#sntp wait-time <value>
```

The *<value>* variable specifies the time (in seconds) between updates. The valid range is **10** to **4294967294** seconds.

3. Use the **sntp retry-timeout** command at the Global Configuration mode prompt to set the number of seconds to wait for a response from the SNTP server before allowing a new request:

```
(config)#sntp retry-timeout <value>
```

The *<value>* variable specifies the time (in seconds) to wait for a response before retrying. The valid range is **3** to **4294967294** seconds.

The following example sets the SNTP server as **time.nist.gov**. All requests for time use version 2 of the SNTP:

```
>enable
#config terminal
(config)#sntp server time.nist.gov version 2
```

Configuring Disconnect Supervision Using the CLI

Disconnect supervision is used in auto attendant, fax, and modem applications to ensure that a connection is not maintained indefinitely when a call has ended or could not be completed. Disconnect supervision monitors an FXO port for a specific condition to determine when the line should be released. The conditions typically monitored include: the lack of battery current (loop current feed open), the transition of battery current from a normal state to a reversed state and back again (reverse loop current feed), or the presence of a call progress tone that indicates that a call cannot be completed or should be disconnected.

To configure disconnect supervision on an FXO port, you must both configure an analog voice trunk for disconnect supervision and connect that voice trunk to an FXO port or range of ports (refer to [Connecting an FXO Port to an Analog Voice Trunk on page 12](#)).



Disconnect supervision can only be configured using the CLI.

Configuring Disconnect Supervision for Busy Tone on an Analog Voice Trunk

Disconnect supervision for busy tones can be configured on a per-trunk basis for loop start and ground start analog voice trunks using the **disconnect-supervision tone busy** command from the Voice Analog Trunk Configuration mode. Use the **no** form of this command to disable disconnect supervision for busy tone.

Upon entering the command, the system will configure the voice trunk to monitor for busy tone. The table below shows the frequency and cadence of the busy release tones supported by NetVanta 6310/6330 Series, NetVanta 6355, and NetVanta 7000 Series voice products.

Country	Frequency (Hz)	Cadence (ms)
Australia	425	375 on 375 off
Belgium	425	500 on 500 off
Canada	480 + 620	500 on 500 off
ETSI	425	250 on 250 off
Ireland	425	500 on 500 off
Mexico	425	250 on 250 off
Puerto Rico	480 + 620	500 on 500 off
United Arab Emirates	400	370 on 370 off
United Kingdom	400	375 on 375 off
United States of America	480 + 620	500 on 500 off

The following example enables disconnect supervision on loop start analog voice trunk **T01**:

```
>enable
#configure terminal
(config)#voice trunk t01 type analog supervision loop-start
(config-T01)#disconnect-supervision tone busy
```

Configuring Dial Tone Detection Timeout Using the CLI

When an outbound call is placed from an FXO port on an AOS voice unit, the FXO seizes the line and waits for a dial tone. Once the unit detects a dial tone, the unit qualifies the tone for one second to determine the tone is indeed a dial tone. Depending on the network, it is possible for the time between when the FXO seizes the line and when the unit detects and qualifies the dial tone to exceed the detection timeout period (the total length of time the unit monitors the line for dial tone before moving to the next trunk or releasing the line). In this case, the dial tone detection timeout period must be lengthened in order for a call to be completed.

To set the dial tone detection timeout period on an FXO port, you must both configure the timeout period on an analog voice trunk and connect that voice trunk to an FXO port or range of ports (refer to [Connecting an FXO Port to an Analog Voice Trunk below](#)).



Dial tone detection timeout can only be configured using the CLI.

Use the **dialtone timeout** command to set the dial tone detection timeout period (in milliseconds) for dial tone detection. Use the **no** form of this command to return to the default value. By default, the dialtone detection timeout period is **2000** milliseconds for the United States, Puerto Rico, and Canada and is **4000** milliseconds for all other supported countries. From the Voice Analog Trunk Configuration mode, enter the command as follows:

```
(config-TRUNK)#dialtone timeout <value>
```

The *<value>* variable specifies the dial tone detection timeout period in milliseconds. The valid range is **1500** to **60000** milliseconds.

The following example specifies that analog loop start trunk **T01** will use a **3000** milliseconds dial tone detection timeout period:

```
>enable
#configure terminal
(config)#voice trunk t01 type analog supervision loop-start
(config-t01)#dialtone timeout 3000
```

Connecting an FXO Port to an Analog Voice Trunk

Use the **connect fxo** command to specify a physical interface for the trunk to use. From the Voice Analog Trunk Configuration mode, enter the command as follows:

```
(config-TRUNK)#connect fxo <slot/port>
```

The *<slot/port>* variable specifies the slot and port of the FXO port.

Use the **connect range fxo** command to specify a range of physical interfaces for the trunk to use. From the Voice Analog Trunk Configuration mode, enter the command as follows:

```
(config-TRUNK)#connect range fxo <range>
```

The *<range>* variable specifies a range of ports in the format *<slot/begin port range - end port range>* (for example, **0/1-4**).

The following example specifies that analog loop start trunk **T01** will use the contiguous port range **fxo 0/1** through **fxo 0/4**:

```
>enable
#configure terminal
(config)#voice trunk t01 type analog supervision loop-start
(config-t01)#connect range fxo 0/1-4
```

Configuring the Dial Plan Using the CLI

The dial plan notifies the AOS voice unit when to stop collecting the digits being dialed and begin forwarding a phone call. Programmed number patterns and types govern the telephone numbers allowed by AOS voice products for inbound and outbound calls. Number-complete templates can be created and stored in the dial plan. The AOS voice unit listens for digits and looks for a match against the number-complete templates in the dial plan. As soon as the digits dialed by the user match a pattern in the dial plan, the call is routed by the switchboard. If the digits dialed do not match any of the number-complete templates, the call is routed by the switchboard after a timeout period expires. In addition to number patterns, call types are defined in the dial plan, allowing the system to recognize dialed numbers as a particular type of call (local, long distance, toll free, etc.).

It is possible to successfully route calls through the unit without configuring any dial plan entries. However, your country may have a unique emergency numbering option or telephone numbering plan that will require configuration changes to the dial plan for proper execution of inbound and outbound calls. At a minimum, ADTRAN strongly recommends that you define your country's emergency service numbers in the dial plan by adding these numbers to the **always-permitted** group. The table below lists the emergency service numbers for supported countries.

Table 4. Emergency Service Numbers

Country	Police	Medical	Fire
Australia	000	000	000
Belgium	112	112	112
Canada	911	911	911
ETSI	112 (European Union)	112 (European Union)	112 (European Union)
Ireland	112 or 999	112 or 999	112 or 999
Mexico	066	065	068
Puerto Rico	911	911	911
United Arab Emirates	112 or 999	998 or 999	997
United Kingdom	112 or 999	112 or 999	112 or 999
United States	911	911	911

For instructions on configuring dial plans using the GUI, refer to [Configuring the Dial Plan Using the GUI on page 24](#).

Use the **voice dial-plan** command to create a dial plan entry. From the Global Configuration mode, enter the command as follows:

```
(config)#voice dial-plan <pattern ID> <group> <pattern> [default | none | <NDT name>]
```

The *<pattern ID>* variable specifies the identification number to assign to this dial plan. The valid range is **1** to **255**.

The *<group>* variable specifies the type of call the dial plan entry will represent. The available choices are: **900-number**, **always-permitted**, **extensions**, **internal-operator**, **international**, **local**, **long-distance**, **operator-assisted**, **specify-carrier**, **toll-free**, **user1**, **user2**, and **user3**.



*All **always-permitted** calls are considered emergency calls and are handled accordingly. By default, 9-911 is the only dial plan pattern in the **always-permitted** group. Additional **always-permitted** dial plan patterns can be defined in the CLI (but not in the GUI) and will be handled exactly like an emergency call by emergency call routing.*

The *<pattern>* variable specifies the dialing pattern that will represent this dial plan entry. You can enter an exact phone number, or you can use wildcards to help define matched numbers. The available wildcards for this command are:

0-9 = Match exact digit only.

M = Any digit 1 to 8.

X = Any single digit (0 to 9).

N = Any digit 2 to 9.

\$ = Any number of digits of any value.

[123] = Any digit contained in the bracketed list.



Do not use dashes, commas, spaces, etc., inside the brackets. Commas are implied between numbers in the brackets.

The special characters **()**, **-**, **+** are always ignored.

Examples: 1) 555-81XX matches 555-8100 to 555-8199.

2) 555-812[012] matches 555-8120 to 555-8122.

3) NXX-XXXX matches 7-digit local.

4) 1-NXX-NXX-XXXX matches long distance calls in North America.

The optional **default** parameter sets the named-digit-timeout (NDT) to the default value. The default value is set with the **voice timeouts interdigit** command. This parameter only applies to the NetVanta 7000 Series.

The optional **none** parameter indicates that no NDT is associated with this dial plan entry. This parameter only applies to the NetVanta 7000 Series.

The optional *<NDT name>* variable specifies the NDT to associate with this dial plan entry. The named-digit-timeout is assigned a timeout value with the **voice timeouts named-digit-timeout** command (refer to [Creating a Named Digit Timeout Using the CLI on page 15](#)). This variable only applies to the NetVanta 7000 Series.

The following example adds **9-112** to the **always-permitted** dial plan. After entering this command, the unit will route any calls matching the pattern as an emergency call.

```
>enable
#configure terminal
(config)#voice dial-plan 1 always-permitted 9-112
```

The following example adds the pattern **9-NXX-XXXX** to the **local** dial plan. This pattern will match phone numbers **9-200-0000** to **9-999-9999**.

```
>enable
#configure terminal
(config)#voice dial-plan 2 local 9-NXX-XXXX
```

Brackets are used to define a range of numbers. The following example defines the range **2000** to **6999**.

```
>enable
#configure terminal
(config)#voice dial-plan 3 extensions [23456]XXX
```

Creating a Named Digit Timeout Using the CLI

An NDT can be created and associated with a number-complete template to indicate the amount of time to wait for additional digits to be dialed before routing the call. Setting the NDT to **default**, uses the system interdigit timeout. Setting the NDT to **none** will immediately route the call after a template match. If no NDT value is specified, the system will assign a value of 0.

Use the **voice timeouts named-digit-timeout** command to create a named-digit-timeout and assign it a value. From the Global Configuration mode, enter the command as follows:

```
(config)#voice timeouts named-digit-timeout <NDT name> [<value>]
```

The *<NDT name>* variable specifies a name for the NDT.

The *<value>* variable indicates the value in seconds for the NDT.

Creating an NDT does not require a value. If a value is not specified, the system assigns the value of 0 seconds.



When removing an NDT and its value, if the NDT is assigned to a dial plan entry, then the deletion is not allowed. The dial plan entry must be removed first and added back into the system without the NDT association.

The following example creates a named-digit-timeout named **short1** and sets the timeout value to **2** seconds:

```
>enable
#configure terminal
(config)#voice timeouts named-digit-timeout short1 2
```

Configuring Accept Numbers for Trunk Groups Using the CLI

Accept numbers are used to configure numbers users can dial on a trunk. Accept numbers control the type of outbound calls users can place on the system. For instructions on how to configure accept numbers using the GUI, refer to [Configuring Accept Numbers for Trunk Groups Using the GUI on page 26](#).

Use the **accept** command from the Voice Trunk Group Configuration mode to specify numbers users can dial on a trunk group:

```
(config-TRUNKGROUP)#accept <pattern> [cost <value>]
```

The *<pattern>* variable specifies the accept numbers for the trunks. You can enter an exact phone number, or you can use wildcards to help define accepted numbers. The available wildcards for this command are:

M = Any digit 1 to 8.

X = Any single digit (0 to 9).

N = Any digit 2 to 9.

\$ = Any number of digits of any value.

[123] = Any digit contained in the bracketed list.



Do not use dashes, commas, spaces, etc., inside the brackets. Commas are implied between numbers in the brackets.

The optional **cost <value>** parameter specifies the cost value for the trunk. This option is used if a call is accepted by several trunks. The call will be routed to the trunk with the lowest cost value. The valid range is **0** to **499**.

The following example allows users on the trunk group **TRUNKGROUP** to dial any 7-digit number:

```
>enable
#configure terminal
(config)#voice grouped-trunk TRUNKGROUP
(config-TRUNKGROUP)#accept NXXXXXX
```

Configuring Reject Numbers for Trunk Groups Using the CLI

Although reject numbers are not required for proper switchboard function, they can be used to restrict callers from making unwanted outbound calls, such as international and 900 number calls. For instructions on how to configure reject numbers using the GUI, refer to [Configuring Reject Numbers for Trunk Groups Using the GUI on page 28](#).

Use the **reject** command from the Voice Trunk Group Configuration mode to specify numbers users cannot dial on a trunk group:

(config-TRUNKGROUP)#**reject** <pattern>

The <pattern> variable specifies the reject numbers for the trunks. You can enter an exact phone number, or you can use wildcards to help define rejected numbers. The available wildcards for this command are:

M = Any digit 1 to 8.

X = Any single digit (0 to 9).

N = Any digit 2 to 9.

\$ = Any number of digits of any value.

[123] = Any digit contained in the bracketed list.



Do not use dashes, commas, spaces, etc., inside the brackets. Commas are implied between numbers in the brackets.

The following example blocks calls to any 900 number on the trunk group **TRUNKGROUP**:

```
>enable
#configure terminal
(config)#voice grouped-trunk TestGroup
(config-TRUNKGROUP)#reject 900$
```

Configuring the E1 Interfaces Using the CLI

There are four main settings to consider when configuring E1 network interfaces. The source timing (clocking), framing format, line coding, and active channels must all be configured to match the circuit supplied by your network provider. By default, all NetVanta E1 interfaces are configured for standard multiframe without the optional configure cyclic redundancy check 4 (CRC4) error correction. Generally, the framing format and line coding default values will be correct for your application and do not need to be changed. For instructions on how to configure the E1 interface using the GUI, refer to [Configuring E1 Interfaces Using the GUI on page 30](#).

Enabling the Interface

All E1 interfaces are disabled by default. Before the E1 interface can pass data, the interface must be enabled using the **no shutdown** command from the E1 Interface Configuration mode.

The following example enables the **E1 2/1** interface:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#no shutdown
```

Configuring the Source Timing

Use the **clock source** command from the E1 Interface Configuration mode to configure the source timing used for the E1 interface on the E1 voice interface module (VIM). By default, the unit is configured to recover clocking from the primary E1 circuit. The table below lists variations of the command.

Table 5. Clock Source Command Variations

Command	Function
clock source internal	Configures the unit to provide clocking using the internal oscillator.
clock source line	Configures the unit to recover clocking from the E1 circuit.
clock source system	Configures the unit to provide clocking from the chassis selection. This command is only supported on the E1 VIM installed in the NetVanta 7000 Series and NetVanta 6355. It is not supported by the integrated PRI T1/E1 interface on the NetVanta 6310.
clock source through	Configures the unit to recover clocking from the circuit connected to the G.703 interface. This command is only supported on the E1 VIM installed in the NetVanta 6355 and NetVanta 7000 Series. It is not supported by the integrated PRI T1/E1 interface on the NetVanta 6310.

The following example configures the unit to provide clocking for the **E1 2/1** interface using the internal oscillator:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#clock source internal
```

Configuring the Framing Format

Use the **framing crc4** command from the E1 Interface Configuration mode to configure CRC4 framing for the E1 interface. This command enables CRC4 bits to be transmitted in the outgoing data stream. The received signal is also checked for CRC4 errors. This parameter should match the framing format provided by the service provider or external device. Also, the framing value must match the configuration of the E1 circuit, as a mismatch will result in a loss of frame alarm. By default, CRC4 framing is disabled on E1 interfaces.

The following example configures the **E1 2/1** interface for CRC4 framing:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#framing crc4
```

Configuring the Line Coding

Use the **coding** command from the E1 Interface Configuration mode to configure the line coding for the E1 interface. This setting must match the line coding supplied on the circuit by the service provider. Also, the line coding configured in the unit must match the line coding of the E1 circuit, as a mismatch will result in line errors. The table below lists variations of the command.

Table 6. Coding Command Variations

Command	Function
coding ami	Configures the line coding for alternate mark inversion (AMI).
coding hdb3	Configures the line coding for high-density bipolar 3 (HDB3).

The following example configures the **E1 2/1** interface for HDB3 line coding:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#coding hdb3
```

Configuring the Tx Value of the Sa4 Bit

Use the **sa4tx-bit** command from the E1 Interface Configuration mode to assign a value (either **0** or **1**) to the Tx spare bit in position 4. By default, the value of the Sa4 bit is **1**. The table below lists variations of the command.

Table 7. Sa4tx-bit Command Variations

Command	Function
sa4tx-bit 0	Specifies a 0 for the transmit value of the Sa4 bit on the E1.
sa4tx-bit 1	Specifies a 1 for the transmit value of the Sa4 bit on the E1.

The following example sets the Tx value of Sa4 to 0:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#sa4tx-bit 0
```

Configuring the TDM Group

Time division multiplexing (TDM) groups must be created to identify which E1 channels to use for data transport. There are no default TDM groups configured on the system. Contact your service provider to determine which channels to use. To create a TDM group, use the following command from the E1 Interface Configuration mode:

```
(config-e1 2/1)#tdm-group <number> timeslots <value> [speed 64]
```

The *<number>* variable identifies the TDM group. The valid range for this variable is **1** to **255**.

The **timeslots** *<value>* parameter specifies the channels to be used in the TDM group. The valid range for this parameter is **1** to **31**. The timeslot value can be entered as a single number or as a contiguous group of channels. For example, **1-10** specifies the first 10 channels of the E1 interface.

The optional **speed 64** parameter specifies the individual channel rate on the E1 interface to be 64 kbps. The default speed is 64 kbps.

The following example creates a TDM group (labeled 5) of 10 channels at 64 kbps each on the E1 2/1 interface:

```
>enable
#configure terminal
(config)#interface e1 2/1
(config-e1 2/1)#tdm-group 5 timeslots 1-10 speed 64
```

Configuration Example

The following example specifies the minimum configuration parameters required for a standard E1 interface:

```
>enable
#config terminal
(config)#interface e1 2/1
(config-e1 2/1)#tdm-group 1 timeslots 1-31
(config-e1 2/1)#no shutdown
(config-e1 2/1)#exit
```

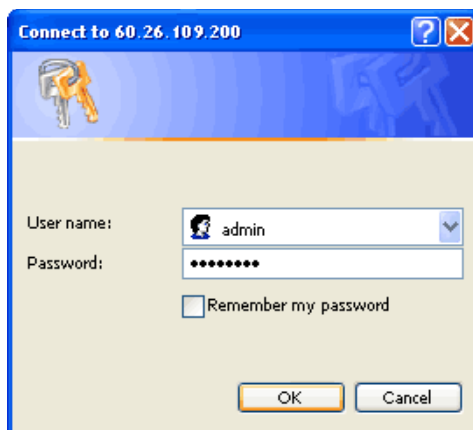
International Configuration Using the GUI

Many international features can be configured using the GUI. However, blank startup configurations, the system country, disconnect supervision for busy tone, always-permitted dial plan patterns, and named digit timeouts can only be configured using the CLI. Refer to [International Configuration Using the CLI on page 2](#) for more information on configuring these features.

Accessing the GUI

To access the GUI, follow these steps:

1. Open a new Web page in your Internet browser.
2. Enter your AOS product's IP address in the Internet browser's address field in the following form:
http://<ip address>/admin. For example:
http://60.26.109.200/admin
3. At the prompt, enter your user name and password and select **OK**.

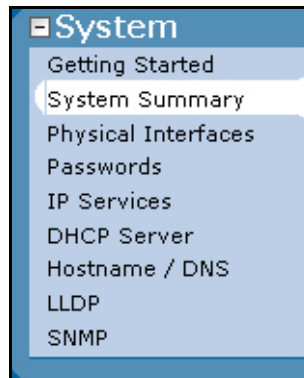


*The default user name is **admin** and the default password is **password**.*

Configuring the Clock Time Zone and SNTP Server Using the GUI

The system clock time zone should be set to the geographic time zone in which the unit is operating. For instructions on how to set the time zone using the CLI, refer to [Configuring the Clock Time Zone Using the CLI on page 9](#). For instructions on how to set the SNTP server using the CLI, refer to [Configuring the SNTP Server Using the CLI on page 10](#). To configure the time zone and SNTP server for the unit using the GUI, follow these steps:

1. Navigate to the **System > System Summary** menu (the system's main menu).



2. Select the **System Time** or **System Date** link to access the **Time Server Configuration** menu.

General System Information	
Firmware Version	A1.00.24.E
Part Number	1200796E1
Serial Number	Proto-29H
System Uptime	4 days, 2 hours, 43 minutes, 33 seconds
System Time	09:00:50 AM GMT-11:00
System Date	January 21, 2008
Current System Clock Source	Internal (Primary clock source locked)
Memory	Total Heap: 96,959,472 Bytes Free Heap: 48,393,200 Bytes
CPU Utilization	System Load: 5.46% 1 Min Avg Load: 6.61% 5 Min Avg Load: 5.52% Min Load: 0% Max Load: 15.43% Context Switch Load: 0.9%
File System	FLASH: Total: 29,582,175 Bytes Used: 29,107,815 Bytes Free: 474,360 Bytes CFLASH: Total: 255,606,784 Bytes Used: 1,495,040 Bytes Free: 254,111,744 Bytes
SNTP Time Server	time.nist.gov
SNTP Last Sync	Not yet synched
<div>Clear CPU Max Load</div>	
Refresh in 4 seconds...	

3. Select the desired time zone from the **Time Zone** drop-down menu.

Time Server Configuration

Warning: Configuring the unit to use SNTP will cause any previous configuration for NTP to be invalid.

Configuration

Use this form to configure the time server.

Time Server: **SNTP**

Time: 11 : 30 AM

Date: December 15 2010

Auto-Correct DST : ☒

Time Zone : (GMT-06:00) Central Time (US & Canada)

SNTP Server Hostname: time.nist.gov

SNTP Server Version : 2

SNTP Wait Time : 86400

SNTP Retry Timeout : 5

Reset Apply

4. Enter the host name of the desired SNTP server in the **SNTP Server Hostname** field.
5. Using the **SNTP Server Version** drop-down menu, choose the SNTP version of the SNTP server entered in Step 4.
6. In the **SNTP Wait Time** field, enter the desired number of seconds between updates from the SNTP server. The valid range for this field is **10 to 4294967294** seconds.
7. In the **SNTP Retry Timeout** field, enter the desired number of seconds to wait for a response from the SNTP server before allowing a new request. The valid range for this field is **3 to 4294967294** seconds.
8. Select **Apply** to apply the time server configurations to the system.
9. Select **Save** at the top right corner of the screen to save the configuration. A dialog box appears if the save is successful. Select **OK** to close the dialog box and return to the previous menu.

Configuring the Dial Plan Using the GUI

The dial plan notifies the AOS voice unit when to stop collecting the digits being dialed and begin forwarding a phone call. Programmed number patterns and types govern the telephone numbers allowed by AOS voice products for inbound and outbound calls. Number-complete templates can be created and stored in the dial plan. The AOS voice unit listens for digits and looks for a match against the number-complete templates in the dial plan. As soon as the digits dialed by the user match a pattern in the dial plan, the call is routed by the switchboard. If the digits dialed do not match any of the number-complete templates, the call is routed by the switchboard after a timeout period expires. In addition to number patterns, call types are defined in the dial plan, allowing the system to recognize dialed numbers as a particular type of call (local, long distance, toll free, etc.).

It is possible to successfully route calls through the unit without configuring any dial plan entries. However, your country may have a unique emergency numbering option or telephone numbering plan that will require configuration changes to the dial plan for proper execution of inbound and outbound calls. At a minimum, ADTRAN strongly recommends that you define your country's emergency service numbers in the dial plan by adding these numbers to the **always-permitted** group. The table below lists the emergency service numbers for supported countries.

Table 8. Emergency Service Numbers

Country	Police	Medical	Fire
Australia	000	000	000
Belgium	112	112	112
Canada	911	911	911
ETSI	112 (European Union)	112 (European Union)	112 (European Union)
Ireland	112 or 999	112 or 999	112 or 999
Mexico	066	065	068
Puerto Rico	911	911	911
United Arab Emirates	112 or 999	998 or 999	997
United Kingdom	112 or 999	112 or 999	112 or 999
United States	911	911	911

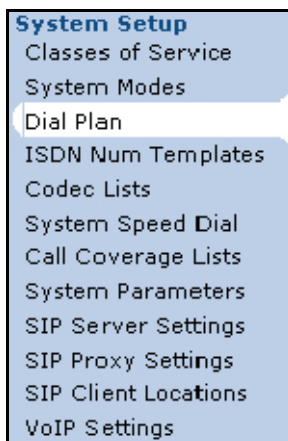
Dial plan entries can be created using the GUI. However, it is recommended that a blank startup configuration be created for the NetVanta 6355, NetVanta 7060, and NetVanta 7100 before configuring the system because the system automatically generates default dial plan entries that may not apply to your country. Blank startup configurations can only be created using the CLI. Refer to [Creating a Blank Startup Configuration Using the CLI on page 3](#) for more information on creating a blank startup configuration. For instructions on how to configure the dial plan using the CLI, refer to [Configuring the Dial Plan Using the CLI on page 13](#).



***Always-permitted** dial plan entries cannot be created through the GUI. They can only be added through the CLI.*

To configure dial plan entries using the GUI, follow these steps:

1. Navigate to **Voice > System Setup > Dial Plan** to open the **Dial Plan** configuration menu.



2. In the **Template field**, enter the desired dial plan pattern. Dashes and parentheses are ignored. You can enter the pattern using the exact characters or using wildcards.

Dial Plan Templates (Advanced)

Dial plan templates allow the system to recognize dialed numbers as a particular type of call. The type of call is matched against the user's class of service to determine whether that user has the permission to make the call.

Add New Dial Plan Template

Template: Valid characters: 0-9, () - M N X [] \$

Number Type: Used when defining what call types are permitted in the user class of service.

View/Delete Dial Plan Templates

The following list details the currently configured dial plan templates. To delete a template, click on the Delete button next to that template. You can use an existing template as the basis for a new template by clicking on a template row. The form above will be initialized to that template's values.

Dial Plan Template	Number Type	
911	Always Permitted	
NXX-XXXX	Local	<input type="button" value="Delete"/>

The available wildcards for this field are:

M = Any digit 1 to 8.

X = Any single digit (0 to 9).

N = Any digit 2 to 9.

\$ = Any number of digits of any value.

[123] = Any digit contained in the bracketed list.

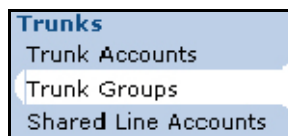
3. Select the number type for the dial plan entry using the **Number Type** drop-down menu. The number type is used when defining what call types are permitted in the user class of service (CoS).
4. Once the dial plan template has been entered and the number type has been selected, select **Add** to add the dial plan template to the system.
5. Repeat Steps 2 through 4 for each additional dial plan entry.
6. Remove dial plan entries by selecting the **Delete** button next to the dial plan template in the **View/Delete Dial Plan Templates** section.
7. Select **Save** at the top right corner of the screen to save the configuration. A dialog box appears if the save is successful. Select **OK** to close the dialog box and return to the previous menu.

Configuring Accept Numbers for Trunk Groups Using the GUI

Accept numbers are used to configure numbers users can dial on a trunk. They control the type of outbound calls users can place on the system. Accept numbers for trunk groups can be configured using the GUI. However, it is recommended that a blank startup configuration be created for the NetVanta 6355, NetVanta 7060, and NetVanta 7100, before configuring the system because AOS automatically generates default accept numbers that may not apply to your country. Blank startup configurations can only be created using the CLI. Refer to [Creating a Blank Startup Configuration Using the CLI on page 3](#) for more information on creating a blank startup configuration. For instructions on how to configure accept numbers using the CLI, refer to [Configuring Accept Numbers for Trunk Groups Using the CLI on page 16](#).

To configure accept numbers using the GUI, follow these steps:

1. Navigate to **Voice > Trunks > Trunk Groups** to access the **Add/Modify/Delete Trunk Groups** menu.



- To create a new trunk group and add accept numbers to it, enter a name for the new group in the **Group Name** field of the **Add a New Trunk Group** section and select add. The **Edit Trunk Group** menu will appear.

To add accept numbers to an existing trunk group, select the name of the group to which you would like to add an accept number in the **Modify/Delete Trunk Group** section. The **Edit Trunk Group** menu will appear.

Add / Modify / Delete Trunk Groups

Use this page to add and configure trunk groups.

Add a New Trunk Group

Group Name: Enter a name for this group.

Modify/Delete Trunk Group

This is a description of this list

Trunk Group	Description	
METASWITCH		<input type="button" value="Delete"/>
GROUP 1		<input type="button" value="Delete"/>

- In the **Detailed View - Permit/Restriction Call Templates** section, select **Configure Advanced Templates**. The **Advanced Permit/Restriction Templates** menu will appear.

☐ **Detailed View - Permit/Restriction Call Templates** ?

Permit Template	Cost
There are no configured Permit Templates	

Restriction Template	Cost
There are no configured Restriction Templates	

?

- In the **Add/Delete Permit Templates** section, enter the accept number template into the **Template** field. Dashes and parentheses are ignored. You may enter the pattern using the exact characters or using wildcards. The available wildcards for this field are:
 - M** = Any digit 1 to 8.
 - X** = Any single digit (0 to 9).
 - N** = Any digit 2 to 9.
 - \$** = Any number of digits of any value.
 - [123]** = Any digit contained in the bracketed list.

Add/Delete Permit Templates

Use this form to add and delete specific outbound permit call templates.

Add Outbound Permit Template

Template: Valid characters: 0-9, () - M N X [] \$ All calls matching the specified pattern will be permitted ?

Cost: Enter cost value between 0-499 for this template (optional) ?

View/Delete Permit Templates

These are all of the Permit templates currently defined for trunk group ' GROUP 1 '. You can delete an existing template by clicking on the 'Delete' button. You can use an existing template as the basis for a new template by clicking on a entry row. The form above will be initialized to that template's values.

Permit Template	Cost
There are no configured Permit Templates	

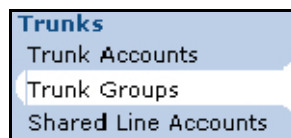
5. Enter the cost value for the accept template in the **Cost** field. This option is used if a call is accepted by several trunks. The call will be routed to the trunk with the lowest cost value. The valid range is **0** to **499**. Select **Add** to add the accept template.
6. Select **Save** at the top right corner of the screen to save the configuration. A dialog box appears if the save is successful. Select **OK** to close the dialog box and return to the previous menu.

Configuring Reject Numbers for Trunk Groups Using the GUI

Although reject numbers are not required for proper switchboard function, they can be used to restrict callers from making unwanted outbound calls, such as international and 900 number calls. Reject numbers for trunk groups can also be configured using the GUI. However, it is recommended that a blank startup configuration be created for the NetVanta 7060, NetVanta 7100, and NetVanta 6355 before configuring the system because the system automatically generates default accept numbers that may not apply to your country. Blank startup configurations can only be created using the CLI. Refer to [Creating a Blank Startup Configuration Using the CLI on page 3](#) for more information on creating a blank startup configuration. For instructions on how to configure reject numbers using the CLI, refer to [Configuring Reject Numbers for Trunk Groups Using the CLI on page 16](#).

To configure reject numbers using the GUI, follow these steps:

1. Navigate to **Voice > Trunks > Trunk Groups** to access the **Add/Modify/Delete Trunk Groups** menu.



2. To create a new trunk group and add accept numbers to it, enter a name for the new group in the **Group Name** field of the **Add a New Trunk Group** section and select add. The **Edit Trunk Group** menu will appear.

To add accept numbers to an existing trunk group, select the name of the group to which you would like to add an accept number in the **Modify/Delete Trunk Group** section. The **Edit Trunk Group** menu will appear.

 A screenshot of the "Add / Modify / Delete Trunk Groups" web page. The page has a blue header with the title. Below the header, there is a text box with the instruction "Use this page to add and configure trunk groups." The page is divided into two main sections. The first section, "Add a New Trunk Group", contains a "Group Name" field with the text "Test Group" and a button labeled "Add". The second section, "Modify/Delete Trunk Group", contains a table with two columns: "Trunk Group" and "Description". The table lists two items: "METASWITCH" and "GROUP 1", each with a "Delete" button to its right.

3. In the **Detailed View - Permit/Restriction Call Templates** section, select **Configure Advanced Templates**. The **Advanced Permit/Restriction Templates** menu will appear.

4. In the **Add/Delete Restriction Templates** section, enter the reject number template into the **Template** field, and select **Add**. Dashes and parentheses are ignored. You may enter the pattern using the exact characters or using wildcards. The available wildcards for this field are:

M = Any digit 1 to 8.

X = Any single digit (0 to 9).

N = Any digit 2 to 9.

\$ = Any number of digits of any value.

[123] = Any digit contained in the bracketed list.

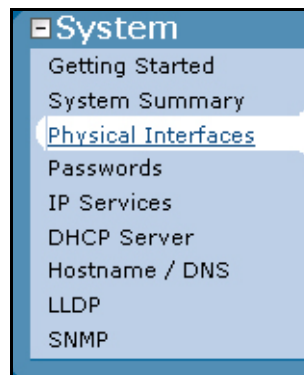
5. Select **Save** at the top right corner of the screen to save the configuration. A dialog box appears if the save is successful. Select **OK** to close the dialog box and return to the previous menu.

Configuring E1 Interfaces Using the GUI

There are four main settings to consider when configuring E1 network interfaces. The source timing (clocking), framing format, line coding, and active channels must all be configured to match the circuit supplied by your network provider. By default, all NetVanta E1 interfaces are configured for standard multiframe without the optional configure CRC4 error correction. Generally, the framing format and line coding default values will be correct for your application and do not need to be changed. For instructions on how to configure the E1 interface using the CLI, refer to [Configuring the E1 Interfaces Using the CLI on page 17](#).

To configure the E1 interface, follow these steps:

1. Navigate to **System > Physical Interfaces** to access the **Physical Interfaces** menu.



2. From the list of physical interfaces, select the name of the E1 interface you would like to configure. The interface should be labeled **e1 <slot/port>**. For example, **e1 2/1**. The **Interface Configuration** menu will appear.

 A screenshot of the 'Configuration for "e12/1"' interface configuration page. The page has a title bar 'Configuration for "e12/1"' and a subtitle 'Basic configuration for the E1 interface.' Below this are several configuration fields:

- Description:** A text input field containing 'Voice'. To its right is the text 'Description label (optional)'.
- Enable:** A checkbox that is checked. To its right is the text 'Enable or disable this interface'.
- Clocking:** A dropdown menu showing 'System'. To its right is the text 'Please go to the [Clock Source](#) page to set the system clock source.'
- Framing:** A dropdown menu showing 'CRC4'. To its right is the text 'Select the framing that matches the network provider framing format' with a help icon.
- Coding:** A dropdown menu showing 'HDB3'. To its right is the text 'Select the coding that matches the network provider line coding'.
- Sa4Tx-Bit:** A dropdown menu showing '0'. To its right is the text 'Select a '0' or '1' for the Tx value of Sa4 on this E1.'

 At the bottom of the form are 'Reset' and 'Apply' buttons.

3. Optionally, enter a description of the interface in the **Description** field.
4. Select the check box next to **Enable** to allow the interface to pass data.
5. Use the **Clocking** drop-down menu to select the source timing used for the E1 interface.

6. Use the **Framing** drop-down menu to select the framing that matches the network provider framing format. Selecting **CRC4** configures CRC4 framing for the E1 interface. This enables CRC4 bits to be transmitted in the outgoing data stream. The received signal is also checked for CRC4 errors.
7. Use the **Coding** drop-down menu to select the coding that matches the network provider line coding.
8. Use the **Sa4Tx-Bit** drop-down menu to select a **0** or **1** for the Tx value of Sa4 on the E1 interface.
9. Select **Apply** to apply the settings to the interface.
10. Select **Save** at the top right corner of the screen to save the configuration. A dialog box appears if the save is successful. Select **OK** to close the dialog box and return to the previous menu.