



# Cisco BTS 10200 Softswitch 10/11-Digit Screening Feature Module

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This document describes the 10/11-digit screening feature for Release 6.0 of the Cisco BTS 10200 Softswitch and explains how to use it.

## Understanding the 10/11-Digit Screening Feature

The 10/11-Digits Screening Feature handles the 10-digit and 11-digit format differences between the Automatic Number Identification (ANI) and Screening List Editing (SLE) table. SLE services allow individual users to screen and manage their incoming calls with features such as Selective Call Forwarding and Selective Call Rejection. You can specify lists of DNs for which the BTS 10200 should screen incoming calls and the action it should apply to the calls.

With the 10/11-Digit Screening Feature, the BTS 10200 applies the rules specified in the DIGMAN\_PROFILE\_ID to the ANI of an incoming call. These rules normalize the ANI before searching for it in the SLE table. The DIGMAN\_PROFILE\_ID used for this normalization is specified in the FEATURE\_CONFIG table. Based on these rules, the system strips away the country code prefix or 1 (for North American Dialing Plan) from the DN to match the ANI with the DN entry in the SLE table. For example, for dialed number 1-207-222-0701, the BTS 10200 strips away the 1 and searches for 207-222-0701 in the SLE.

For ROW, you can specify the rules so that a specific country code is removed. The following examples describe DIGMAN entries.

- For North American Numbering Plan (NANP): **Rule=1, match-string=^1;replace-string = NONE;**
- To remove country code 91: **Rule=1, match-string=^91;replace-string = NONE;**

[Table 1](#) shows possible incoming DN formats and the corresponding entries in the SLE, where IP = 011 and country code = 1.



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**Table 1** *Incoming ANI Format with SLE Entry*

Incoming ANI	SLE Entry
011-1-207-222-0701	Not added to SLE because it is an international number.
1-207-222-0701	207-222-0701
207-222-0701	207-222-0701
222-0701	207-222-0701

The 10/11-Digit Screening Feature supports all features associated with the SLE table, including

- Selective Call Rejection
- Selective Call Acceptance
- Selective Call Forwarding
- Distinctive Ringing Call Waiting
- No Solicitation Announcement
- Call Blocking
- Automatic Callback/Automatic Ringback
- Call Waiting Call Hold
- ITU Call Waiting

The 10/11-Digit Screening feature supports Centrex and non-Centrex subscribers.

With previous releases of the Cisco BTS 10200 Softswitch, the subscriber invoked an SLE -based feature such as Selective Call Forwarding so that an incoming call from a specific DN would be forwarded. The BTS 10200 compared the ANI received from the Call Agent (CA) against the feature-specific entries in the SLE table. As a result, if the ANI had 11 digits and the SLE entry for the same number had 10 digits, the subscriber's attempt to invoke the feature failed.

**Note**

This feature supports only the condition when the ANI is 11 digits and the SLE entry is 10 digits.

## SLE Table Entries

You can add a DN to the SLE through the Interactive Voice Response (IVR), but only the service provider can add a DN to the SLE using CLI. For additional information about IVR and SLE features, refer to the *Cisco BTS 10200 Softswitch Network and Feature Descriptions Guide*.

## SLE Entries Using CLI

When you use the CLI to add a DN to the SLE, the BTS 10200 stores the DN and DN type exactly as you enter them. The BTS 10200 supports the following DN types:

- Extension
- Partial
- FDN (Full DN)

Refer to *Cisco BTS 10200 Softswitch Network and Feature Descriptions Guide* for additional information about DN types.

## SLE Entries Using IVR

Both Centrex and POTS subscribers can add a DN to the SLE using IVR. The BTS 10200 always plays back the number you enter in the SLE.

## Validation

The BTS 10200 makes the validations described in the following sections.

### Centrex Subscribers

The Nature of Address (NOD) is obtained by the Custom Dial Plan (CDP) associated with that subscriber. For example, if a Centrex subscriber dials an extension, the NOD is the extension. If the subscriber dials the attendant, the NOD is attendant-access.

When you add an extension from the IVR menu, the BTS validates the extension against the CDP. If you add a DN, the BTS 10200 adds it to the SLE exactly as you entered it. The BTS 10200 does not attempt to verify the DN. Also, the BTS 10200 does not convert a partial DN to a complete DN.

You can add or delete NODs in the NOD-restrict-list of the SLE. The BTS 10200 restricts the following NOD types:

- International
- Directory Assistance
- Directory Assistance Toll
- Emergency
- Toll Free
- 900
- Busy Line Verification
- Attendant

If the you attempt to add an international DN to the SLE, for example, the BTS 10200 plays back the invalid number announcement.

**Note**

For additional information about DN types, refer to [“SLE Entries Using CLI”](#).

## POTS Subscribers

For a POTS subscriber, the NOD can be emergency, toll-free, national, international, etc.

The BTS 10200 ensures the DN you entered is reachable by checking the dial plan. If you attempt to add a 7-digit DN to the SLE, the BTS 10200 normalizes it to a 10-digit DN before storing it in the SLE.

# Configuring

Use the following procedure to provision the BTS 10200 with the 10/11-Digit Screening Feature:

**Step 1** Add a digit manipulation profile.

```
add digman-profile id=sle-digman;description=to normalize the DN for SLE based features
```

**Step 2** Add a digit manipulation ID.

```
add digman id=sle-digman;rule=1;match-string=^1;replace-string=NONE;description=to normalize the DN for SLE based features;
```

**Step 3** Add the feature.

```
add feature-config fname=SLE;type=DIGMAN-PROFILE-ID;value=sle-digman;
```

## Restricting NODs

Use the following example command to specify the NODs restricted for the SLE feature. You must enter the command for each NOD you want restricted.

```
add nod_restrict_list fname=SLE,nod=INTL;  
add nod_restrict_list fname=SLE,nod=EMG;  
add nod_restrict_list fname=SLE,nod=BLV;
```

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