Introduction

This chapter provides a basic understanding of the Cisco BTS 10200 Softswitch routing types and an explanation of all routing types and explanation of how they function. Additionally examples of the routing types are provided. This chapter is divided into the following sections:

- Routing Types
- Call Types
- Policy Based Flexible Routing

Routing Types

For call routing to occur there is some basic information needed to process the call route. That information is obtained from either the subscriber table or the trunk group table. The information gathered from the subscriber table or the trunk group table provides the initial starting point for routing a call. Additional information must be gathered from the dial-plan profile table and dial-plan identification (ID) tables. These are the main tables which determine call routing and are instrumental in determining other information needed to route a call, such as call type and destination.

This section provides the BTS 10200 routing type information. The following topics are covered in this section:

- Basic Subscriber Routing—This is the BTS 10200 routing type which is based on subscriber needs. Basic Subscriber Routing can be used for both line and trunk routing.
- Basic Trunk Routing—This is the BTS 10200 routing type which is used for basic trunk routing. Basic Trunk Routing can only be used for trunk routing.
- Service Provider Routing—This is the BTS 10200 routing type which is used in the wholesale network environment where the network operator owns the facility and provides transport facilities to carry voice calls on behalf of smaller service providers. Service Provided Routing can only be used for trunk routing.
- Carrier Based Routing—This is the BTS 10200 routing type which is based on specific carrier needs. Carrier Based Routing can be utilized for both line and trunk routing.
**Routing Types**

- **Basic Dial Plan Routing**—This is the BTS 10200 default routing type. Basic Dial Plan Routing can be utilized for both line and trunk routing.

- **Automatic Number Identification Based Routing**—This is the BTS 10200 routing type based on automatic number identification (ANI) as it comes in on a trunk on a hosted private branch exchange (PBX) configuration. ANI Based Routing can only be utilized for trunk routing.

- **Nature of Address Routing (ITU Local Number Portability)**—Nature of address (NOA) routing is used to select separate dial plans for directory number (DN) and routing number (RN). The ISDN user part (ISUP) initial address message (IAM) called party number (CdPN) parameter contains a NOA value. The NOA value distinguishes the format of the digits, i.e., DN only vs. RN+DN. In some countries, DN prefixes may be the same as some RNs. In these cases, NOA routing allows using different dial plans for DN routing and RN routing.

- **Cluster Routing**—A cluster is defined as two or more Cable Management Servers (CMSs) along with Media Gateway Controllers (MGCs) (or combined CMS/MGCs) deployed within a network. The cluster appears as one logical CMS/MGC looking towards the Public Switched Telephony Network (PSTN).

- **On-Net Routing and LNP for Inter-CMS Routing**—On-Net Routing and LNP for Inter-CMS routing provides ANSI LNP query support for carrier calls, LNP query for on-net routing (inter-CMS routing), on-net route bypass of carrier route, removal of LNP query result data when Carrier LNP-QUERY= N, and ignore inbound LNP information.

- **International WZ1 (INTL_WZ1) Preferred Carrier Routing**—Enhances the flexibility of preferred carrier routing for INTL_WZ1 calls.

**Basic Subscriber Routing**

This section provides a detailed description of the BTS 10200 basic subscriber routing. Refer to Figure 2-1 for visual representation of basic subscriber routing flow while reviewing the following detailed step-by-step basic subscriber routing flow.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Subscriber incoming received or placed.</td>
</tr>
<tr>
<td>2</td>
<td>Get the subscriber table (sub-profile ID).</td>
</tr>
<tr>
<td>3</td>
<td>Get the subscriber-profile table (dial-plan identification (DP-ID)).</td>
</tr>
<tr>
<td>4</td>
<td>Go to the dial-plan (based on DP-ID).</td>
</tr>
<tr>
<td>5</td>
<td>Go to destination table and get the call type and destination.</td>
</tr>
<tr>
<td>6</td>
<td>Determine the call type. If the call type is toll free, 900, or 500, proceed to Step 7. If the call type is casual, proceed to Step 8. If the call type is via a presubscribed interexchange carrier (PIC), proceed to Step 9.</td>
</tr>
<tr>
<td>7</td>
<td>If the call type is toll free, 900, or 500, the BTS 10200 will use the dial plan to select the call route and to route the call.</td>
</tr>
<tr>
<td>8</td>
<td>If the call type is casual, the BTS 10200 will use the carrier routing information to select the call route and to route the call.</td>
</tr>
<tr>
<td>9</td>
<td>If the call type is via a PIC, the BTS 10200 will use the PIC carrier routing information to select the call route and to route the call.</td>
</tr>
</tbody>
</table>
Figure 2-1  Basic Subscriber Routing

1. Subscriber Incoming Call
   - Get Subscriber Table (Sub-profileid)
   - Get subscriber-profile Table (dial-plan-id)
   - Go to Dial-plan (based on DP-ID)
   - Go to Destination Table (get call type and destination)

2. CALLTYPE
   - TOLLFREE
     - Yes
     - No
   - 900
     - Yes
     - No
   - 500
     - Yes
     - No

3. CASUAL
   - No

4. PIC(1:3)
   - Yes
   - No

5. DP_Routing (SUB->DP)
   - No

6. Carrier_Routing (CASUAL)
   - No

7. Carrier_Routing (PIC(1:3))
   - No

8. Select Route
   - Yes
   - NOT FOUND
   - No
Basic Trunk Routing

This section provides a detailed description of the BTS 10200 basic trunk routing. Refer to Figure 2-2 for visual representation of basic trunk routing flow while reviewing the following detailed step-by-step basic trunk routing flow.

Step 1  Trunk group (TG) call received or placed.
Step 2  Get the DP-ID from the TG.
Step 3  Go to the dial-plan and get the destination based on the digits and DP-ID.
Step 4  Go to the destination table and get the call type and the route.
Step 5  Determine the call type. If the call type is toll free, 900, or 500, proceed to Step 6. If the call type is local traffic, proceed to the Step 7. If the call type is casual service provider (SP), proceed to Step 8. If the call type is transit network selection (TNS), proceed to Step 9. If the call type is TG carrier, proceed to Step 10. If the call type is TG SP, proceed to Step 11.
Step 6  If the call type is toll free, 900, or 500, the BTS 10200 will use the dial plan to select the call route and to route the call.
Step 7  If the call type is local traffic, the BTS 10200 will use the dial plan to select the call route and to route the call.
Step 8  If the call type is casual SP, the BTS 10200 will use the SP routing to select the call route and to route the call. If the SP routing is not found, the BTS 10200 will use the dial plan to select the call route and to route the call.
Step 9  If the call type is TNS, the BTS 10200 will use the carrier routing to select the call route and to select the call route and to route the call. If the carrier routing is not found, the BTS 10200 will use the dial plan to select the call route and to route the call.
Step 10 If the call type is TG carrier, the BTS 10200 will use the carrier routing to select the call route and to route the call. If the carrier routing is not found, the BTS 10200 will use the dial plan to select the call route and to route the call.
Step 11 If the call type is TG SP, the BTS 10200 will the SP routing to select the call route and to route the call. If the SP routing is not found, the BTS 10200 will use the dial plan to select the call route and to route the call.
Figure 2-2 Basic Trunk Routing

TG Incoming Call

From Trunk Group get dial-plan id

Go to dial-plan and get destination based on digits and dp-id

Go to destination table and get call type and route

CALLTYPE TOLLFREE
900 500

Yes

No

LOCAL TRAFFIC

Yes

No

Casual SP

Yes

No

SP_Routing (casual SP)

TNS

Yes

No

Carrier_Routing (TNS->CARRIER)

TG

CARRIER

Yes

No

Carrier_Routing (TG->CARRIER)

SP

Yes

No

SP_Routing (TG->SP)

Select Route

NOT FOUND
Service Provider Routing

This section provides a detailed description of the BTS 10200 service provider routing. Refer to Figure 2-3 for visual representation of service provider routing flow while reviewing the following detailed step-by-step service provider routing flow.

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**Step 1**  Service provider call received.

**Step 2**  Determine if service provider routing is available. If service provider routing is available, proceed to Step 3. If service provider routing is not available, proceed to Step 4.

**Step 3**  If service provider routing is available, the BTS 10200 will use the service provider dial plan to select the call route and to route the call. If the service provider dial plan can not be found, proceed to Step 4.

**Step 4**  If service provider routing is not available or if the service provider dial plan can not be found, the BTS 10200 will query the service provider which dial plan to use. If a trunk group dial plan is available, proceed to Step 5. If a trunk group dial plan is not available, proceed to Step 6.

**Step 5**  If a trunk group dial plan is available, the BTS 10200 will use the trunk group dial plan to select the call route and to route the call.

**Step 6**  If a trunk group dial plan is not available, the BTS 10200 will query the service provider route guide index to select the call route and to route the call.

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**Figure 2-3 Service Provider Routing**
Carrier Based Routing

This section provides a detailed description of the BTS 10200 carrier based routing. Refer to Figure 2-4 for visual representation of carrier based routing flow while reviewing the following detailed step-by-step carrier based routing flow.

**Step 1**  
Carrier based routing call is received.

**Step 2**  
Determine if the carrier is being screened. If the carrier is being screened, proceed to Step 3. If the carrier is not being screened, proceed to Step 4.

**Step 3**  
If the carrier is being screened, the BTS 10200 will determine if the carrier call processing is being remotely blocked (RTM_CP_BLOCK). If the carrier call processing is being remotely blocked, the call can not be completed and will be dropped.

**Step 4**  
If the carrier is not being screened, the BTS 10200 will determine if the carrier is a recognized service provider. If the carrier is a recognized service provider, proceed to Step 5. If the carrier is not a recognized service provider, proceed to Step 6.

**Step 5**  
If the carrier is a recognized service provider, the BTS 10200 will use the service provider routing to select the call route and to route the call.

**Step 6**  
If the carrier is not a recognized service provider, the BTS 10200 will determine if a carrier dial plan is configured. If a carrier dial plan is configured, proceed to Step 7. If a carrier dial plan is not configured, proceed to Step 8.

**Step 7**  
If a carrier dial plan is configured, the BTS 10200 will use the carrier dial plan to select the call route and to route the call.

**Step 8**  
If a carrier dial plan is not configured, the BTS 10200 will determine if a carrier remote call processing to local exchange carrier operations support system is available (RTM_CP_CARRIER_2_LECOSS). If the RTM_CP_CARRIER_2_LECOSS is available, proceed to Step 9. If the RTM_CP_CARRIER_2_LECOSS is not available, proceed to Step 10.

**Note**  
Step 8 is skipped for toll traffic. If the traffic is toll traffic, proceed to Step 10.

**Step 9**  
If the RTM_CP_CARRIER_2_LECOSS is available and if the traffic is not toll traffic, the BTS 10200 will use the RTM_CP_CARRIER_2_LECOSS to select the call route and to route the call.

**Step 10**  
If the RTM_CP_CARRIER_2_LECOSS is not available, the BTS 10200 will use the carrier guide index to select the call route and to route the call.
Figure 2-4  Carrier Based Routing

Carrier_Routing  
(CARRIER)

- Yes → RTM_CP_BLOCK
- No

- Yes → SP_Routing  
(CARRIER->SP)
- No

- Yes → Dial-Plan Routing
- No
  - Skip this for toll traffic.
  - RTM_CP_CARRIER_2_LECOSS
  - CARRIER->route_guide_idx
Basic Dial Plan Routing

This section provides a detailed description of the BTS 10200 basic dial plan routing. Refer to Figure 2-5 for visual representation of basic dial plan routing flow while reviewing the following detailed step-by-step basic dial plan routing flow.

Step 1  Basic dial plan routing call received.

Step 2  Determine if the NOA for the received call is an international call. If the call is an international call, the BTS 10200 will use the international dial plan to select the call route and to route the call. If the call is not an international call, proceed to Step 3.

Step 3  Determine if the call destination is found. If the call destination is not found, the BTS 10200 will return a destination not found response (NOT FOUND) and will drop the call. If the call destination is found, proceed to Step 4.

Step 4  Determine if a call destination subscriber is found. If a call destination subscriber is found, the BTS 10200 will return a subscriber (SUB) response and will use the subscriber information to select the call route and to route the call. If a call destination subscriber is not found, proceed to Step 5.

Step 5  Determine if a call destination route is found. If a call destination route is found, the BTS 10200 will return a destination (DEST) response and will use the route guide index to select the call route and to route the call. If a call destination route is not found, proceed to Step 6.

Step 6  Determine if a call destination route identification (RID) is found. If a call destination RID is found, the BTS 10200 will return a DEST response and will use the route index to select the call route and to route the call. If a call destination RID is not found, proceed to Step 7.

Step 7  Determine if a destination carrier is found. If a destination carrier is found, proceed to the Step 8. If a destination carrier is not found, the BTS 10200 will return an error and will drop the call.

Step 8  Determine the call type. If the call type is toll free, 900, or 500, the BTS 10200 will select the call route and to route the call using the destination carrier routing. If the call type is not toll free, 900, or 500, the BTS 10200 will return an error and will drop the call.
Figure 2-5  Basic Dial Plan Routing

- **DP_Routing (DP Digits)**
  - If (dp1->idp)
    - default_idp = dp1->idp
  - else
    - default_idp = ca_config->idp
  - **INTL DIAL PLAN**
    - **DESTINATION FOUND**
      - No
        - **DESTINATION SUB**
          - No
            - **DESTINATION ROUTE**
              - No
                - **DESTINATION CARRIER**
                  - No
                    - **CALLTYPE TOLLFREE**
                      - 900
                      - 500
                        - **YES**
                          - Carrier_Routing (DEST->CARRIER)
                        - **NO**
                          - **YES**
                            - Return DEST->route_guide_idx
                          - **NO**
                            - Return DEST->route_idx
                      - **NO**
                        - Return ERROR
                  - **YES**
                    - Return DEST->route_idx
              - **YES**
                - **YES**
                  - Return SUB
              - **NO**
                - Return NOT_FOUND
        - **YES**
          - Return DEST ->route_guide_idx
    - **YES**
      - No
Automatic Number Identification Based Routing

This section provides a detailed description of the BTS 10200 ANI based routing. Refer to Figure 2-6 for visual representation of ANI based routing flow while reviewing the following detailed step-by-step ANI based routing flow.

**Step 1**  A TG incoming call is received.

**Step 2**  Get the dial plan ID from the TG.

**Step 3**  Go to the dial plan and get the call destination based on the digits and the dial plan ID.

**Step 4**  Go to the destination table and the get the call type and call route.

**Step 5**  Check for the ANI based routing flag. If the ANI based routing flag is available, the BTS 10200 will use the ANI to determine the subscriber characteristics and then will route the call based on those characteristics. If the ANI based routing flag is not available, the BTS 10200 will select the call route and will route the call using normal TG routing.

**Figure 2-6  Automatic Number Identification Based Routing**
Nature of Address Routing (ITU Local Number Portability)

NOA routing is used to select separate dial plans for DN and RN. The ISUP IAM CdPN parameter contains a NOA value. The NOA value distinguishes the format of the digits, i.e., DN only vs. RN+DN. In some countries, DN prefixes may be the same as some RNs. In these cases, NOA routing allows using different dial plans for DN routing and RN routing.

For a call where the CdPN is a normal DN, the NOA is set to the ITU Q.769 value of 3, meaning national (significant) number. After a local number portability (LNP) query for a ported number, the CdPN consists of the RN and DN concatenated together. The ITU Q.769 NoA value of 8 is used to indicate that the CdPN is in the RN + DN format.

Routing Number

A RN, also known as network routing number, is used to route the call to a ported number after an LNP query to the recipient network or switch. In some countries, the RN consists of a network ID plus an equipment ID. For example, in some countries, the RN consists of a two digit operator code plus a two digit equipment code. Together, the operator code and equipment code, combined as the RN, can be used to route to any possible recipient switch. In some countries, for example, Sweden, the RN contains only the network ID. The call is routed to the recipient, and then another LNP query is required to obtain an RN that identifies the specific recipient switch.

Switch Types

In LNP call scenarios, the BTS can be considered to be one of the following switch types:

- **Originating Switch**—Subscriber origination. An originating switch is the end office where a subscriber dials a ported directory number (DN). A switch that initiates call forwarding (CFU/CFB/CFNA) is considered the originating switch with respect to the forwarded leg of the call.
- **Transit Switch**—An incoming trunk call is routed out to another switch. Also known as an intermediate switch.
- **Donor Switch**—Processes a call originating from a subscriber or trunk to a called directory number (DN) of a subscriber ported out of the given BTS 10200 donor switch to a recipient switch. In some cases, the donor switch may also be the originating or intermediate switch.
- **Recipient Switch**—Receives a call originating from a subscriber or trunk and has a called DN of a subscriber ported in to the given BTS 10200 Softswitch. In some cases, the recipient switch may also be the originating switch.
Query Types

The BTS 10200 performs queries of the LNP database in order to route a call. It may also be configured to perform queries for another backward switch that is not capable of LNP queries.

ITU LNP supports the following query types:

- **All Calls Query (ACQ)** — An LNP query is performed by the BTS 10200 on all originating calls by BTS subscribers. In some cases, the BTS performs an ACQ for another switch that does not have the capability. This method is efficient for networks with many ported subscribers.

- **Query On Release (QOR)** — A call is routed without a query. When it reaches the donor switch, the call is released backward with the QOR cause code of OOR: Ported Number (14). The originating switch receives the REL with QOR, performs the LNP query, and routes the call on to the recipient switch. This method is efficient for networks with few ported subscribers.

- **Onward Donor Based Routing (ODBR)**, also known as Onward Call Routing (OCR) — LNP queries are only performed in a donor switch when it is determined that the called party is ported-out of the switch. The donor switch performs the query and routes the call onward to the recipient switch. This method is efficient for networks with very few ported subscribers.

**All Calls Query (ACQ)**

All Calls Query (ACQ), shown in Figure 1, usually applies to a subscriber origination (originating switch). A subscriber is ported out of the donor switch and ported in to the recipient switch. The ACQ query is performed on the originating switch before routing the call directly to the recipient switch. The originating switch queries the LNP database for the routing number of the ported switch.

![Figure 2-7 All Calls Query](image)

ACQ might also be performed by an intermediate or donor switch for another switch or network.
Intermediate or Donor Switch Performs ACQ for Another Switch or Network

The BTS 10200 may be required to perform ACQ for another switch that does not have that capability. For example, an international gateway exchange may not have access to the local country LNP database, so the ACQ is performed at the point of interconnect (POI) by the intermediate switch.

To configure the BTS to perform ACQ on incoming calls from a particular trunk group, set the ALL-CALL-QUERY=Y in the LNP Profile table and the token PERFORM-LNP-QUERY=Y in the incoming Trunk Group table.

A query will then be performed on each call received from that trunk group unless not allowed by the destination used for a particular call. For more information, see the Destination Table ACQ Controls section.

Destination Table ACQ Controls

- ACQ-LNP-QUERY=NA in the Destination table is used when an ACQ is not applicable, for example, when the country does not support LNP or ACQ or when the operator does not want the Destination table to have any affect on LNP queries as configured in the LNP Profile and Trunk Group tables.

- ACQ-LNP-QUERY=LNP-QUERY-BASED-ON-CALL-TYPE in the Destination table is provided to allow or prevent ACQ queries for certain call types. For example, LNP queries should not be performed for emergency calls. When ACQ-LNP-QUERY=LNP-QUERY-BASED-ON-CALL-TYPE, in the Destination table, the value of the LNP-QUERY token in the Call Type Profile table determines whether a query will be allowed for a given call type (and the value of the PERFORM-LNP-QUERY in the Trunk Group table, if the call is an incoming trunk group).

Note: For call types EMG, FIRE, POLICE, or AMBULANCE an ACQ query will not be performed under any circumstances.

- ACQ-LNP-QUERY=PERFORM-LNP-QUERY and ACQ-LNP-QUERY=NO-LNP-QUERY—ACQ queries are performed for a subset of calls based on the called number prefix. To support this requirement, ALL-CALLS-QUERY=Y in the LNP Profile table. In addition, calls to the specific prefixes requiring ACQ have dial-plan entries pointing to destinations with ACQ-LNP-QUERY, in the Destination table, set to PERFORM-LNP-QUERY. For calls to these ACQ destinations, if the call originates on a trunk, then the Trunk Group table PERFORM-LNP-QUERY also must be set to 'Y' for a query to be performed.

- ACQ-LNP-QUERY=NO-LNP-QUERY—There is a requirement to block queries on outgoing carrier calls. The value ACQ-LNP-QUERY=NO-LNP-QUERY, in the Destination table, indicates that a query will not be performed on any call to this destination.

ACQ and Call Forwarding

A call to a BTS subscriber may be forwarded to another number, for example, in the case of CFU, CFB, or CFNA. For the purposes of LNP, the forwarded call is considered a new subscriber origination, and the switch where the forwarding occurs is the originating switch. If ACQ is configured, a query is performed on the forwarding leg using the forwarded-to DN.
ACQ Matrix

Table 2-1 and Table 2-2 illustrate which token combinations result in a query. In general, a query must be allowed at all applicable levels for a query to be performed. For each row in the table, the particular combination of LNP-Profile table ALL-QUERY=Y/N, Destination table ACQ-LNP-QUERY value, plus Call Type Profile value, where applicable, result in a BTS ACQ query being performed or not performed.

Table 2-1 Subscriber Origination ACQ Matrix

<table>
<thead>
<tr>
<th>LNP Profile</th>
<th>Destination ACQ-LNP-QUERY = NA</th>
<th>Destination ACQ-LNP-QUERY = PERFORM-LNP-QUERY</th>
<th>Destination ACQ-LNP-QUERY = NO-LNP-QUERY</th>
<th>Destination (ACQ-LNP-QUERY = ACQ-BASED-ON-CALL-TYPE) and (Call-Type-Profile for call type LNP-QUERY = Y)</th>
<th>Destination (ACQ-LNP-QUERY = ACQ-BASED-ON-CALL-TYPE) and (Call-Type-Profile for call type not present or LNP-QUERY = N)</th>
<th>BTS ACQ Query Performed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
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Table 2-2  Trunk Origination ACQ Matrix

<table>
<thead>
<tr>
<th>LNP Profile ALL-CALL-QUERY</th>
<th>Incoming Trunk Grp</th>
<th>Destination ACQ-LNP-QUERY = NA</th>
<th>Destination ACQ-LNP-QUERY = PERFORM-LNP-QUERY</th>
<th>Destination ACQ-LNP-QUERY = NO-LNP-QUERY</th>
<th>Destination (ACQ-LNP-QUERY = ACQ-BASED-ON-CALL-TYPE) and (Call-Type-Profile for call type LNP-QUERY = Y)</th>
<th>Destination (ACQ-LNP-QUERY = ACQ-BASED-ON-CALL-TYPE) and (Call-Type-Profile for call type not present or LNP-QUERY = N)</th>
<th>BTS ACQ Query Performed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
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<td>N</td>
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<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>
Query On Release (QOR)

For Query on Release (QOR), illustrated in Figure 2-8, calls are routed normally, with no LNP query, until a call is received for a ported-out subscriber at the donor switch. The donor switch supporting QOR clears the call and sends backward release (REL) with the QOR cause code specified by the network, cause value QOR: Ported Number (14) in ITU/ETSI networks. Each intermediate/transit switch in turn clears backward with the same QOR release cause until finally the originating switch receives the backward REL. This originating switch performs the QOR query and re-routes the call onward towards the recipient switch.

A BTS is configured for QOR when the LNP Profile Table’s QUERY-ON-RELEASE token is set to Y.

For a call attempting to terminate to a ported-out subscriber (donor switch), ODBR will take precedence over QOR. For a subscriber origination (originating switch), ACQ takes precedence over QOR, so the call will be initially correctly routed to the recipient switch, and no REL with cause value QOR: Ported Number (14) will be received (other than for a network routing error).

The BTS performs one of the following functions for QoR:

- **Donor Switch**
- **Intermediate or Transit Switch**
- **Originating Switch**
Donor Switch

- Normal case—When the BTS receives a call to a DN with a DN2subscriber record, if the STATUS has a value of PORTED-OUT, and if the LNP Profile table indicates QUERY-ON-RELEASE=Y, then a backward release (REL) is sent with the QOR ported number release cause defined in the LNP Profile table (defaults to cause value QOR: Ported Number (14)).

- QOR not supported by backward switch—For a trunk originated call to a ported-out subscriber, the incoming trunk group may indicate that QOR is not supported by the previous switch or network and that the BTS is expected to perform the QOR query (LNP Profile table QUERY-ON-RELEASE=Y and Trunk Group table PERFORM-LNP-QUERY =Y). In this case, a QOR query is performed by the BTS and the call is re-routed onward to the recipient switch.

- Misrouted call or configuration error—If the dn2subscriber record STATUS has a value of PORTED-OUT, but the LNP Profile table QUERY-ON-RELEASE=N and ONWARD-CALL-ROUTING=N, a network routing error has occurred (for example, the CRD LNP database is incorrect, the originating switch performing ACQ misrouted the call, or the BTS DN2subscriber or LNP Profile flags are incorrect). For a misrouted call where the CdPN contained a regular non-ported DN, the BTS will clear the call with a non-LNP release cause indicating an unallocated number; otherwise, if the CdPN contained the ported NOA as a result of the incoming trunk call or subscriber origination on this switch, then the cause misrouted ported number is used.

Intermediate or Transit Switch

- Normal case—When the BTS receives a backward REL with the QOR ported number release cause, the BTS clears the call and sends a backward REL with the same release cause.

- QOR not supported by backward switch—If the incoming trunk group indicates that QOR is not supported by the previous switch or network and that the BTS is expected to perform the QOR query (LNP Profile table QUERY-ON-RELEASE =Y and Trunk Group table PERFORM-LNP-QUERY =Y), a QOR query is performed by the BTS and the call is re-routed onward to the recipient switch.

Originating Switch

- Normal case—When the BTS receives a backward REL with the QOR ported number release cause, if the LNP Profile table QUERY-ON-RELEASE=Y, a query is preformed. The call is then re-routed onward to the recipient switch.

- When the BTS receives a backward REL with cause QOR: Ported Number (14), if the LNP Profile table QUERY-ON-RELEASE=N, this cause value is not defined as a QOR ported number cause value.

- When the BTS receives a backward REL with the QoR ported number release cause, and the LNP Profile table QUERY-ON-RELEASE=Y, if the BTS determines that a query was done previously (ACQ) which did not find an RN and the call was routed with the DN, the call is cleared with a cause unallocated number.

- When the BTS receives a backward REL with the QOR Ported Number release cause, if the BTS determines that a query was done previously (ACQ) that returned an RN, and the call was routed using the RN and NOA for ported number, then the call is cleared with a cause 31 unspecified This case is normally not expected to occur. If the BTS is the donor switch in this case and receives a called party number with ported NOA, then REL with cause unallocated number is sent back to the originating switch. Cause QoR: Ported Number (14) is not used for an incoming call containing a ported number NOA.
Intermediate or Donor Switch Performing QoR for Another Switch or Network

For QoR, the LNP query is only done on the originating switch, unless the BTS is required to perform the QoR query for another switch that does not have that capability. For example, an international gateway exchange may not have access to the local country-specific LNP database, so the query is performed by the intermediate switch.

QoR and Call Forwarding

A call terminating to a BTS subscriber may be forwarded to another number, for example, in the case of CFU, CFB, or CFNA. In the case of LNP, the forwarded call is considered a new subscriber. If a backward REL with the ported number release cause is received, and QoR is configured, a query is performed to route the forwarding leg to the new recipient switch.

Onward Donor Based Routing (ODBR)

For ODBR, also known as Onward Call Routing (OCR), LNP queries are performed in a donor switch. The called party number is used to access the DN2subscriber table and, if the STATUS=PORTED-OUT or LNP-TRIGGER=Y, an LNP query is performed. After the query, the donor switch routes the call onward to the recipient switch.

ODBR is illustrated in Figure 2-9.

Figure 2-9    ODBR Routing
Subscriber Based LNP Trigger on a Donor Switch

The LNP-TRIGGER token in the DN2subscriber table is an alternative to porting by changing the DN2subscriber STATUS token to PORTED-OUT. It allows a seamless transition on a donor switch. However, it is not recommended if porting procedures normally require provisioning changes at the time the porting becomes effective.

During the transition period of a local subscriber porting out, the DN2subscriber record LNP-TRIGGER token may be set to Y, which forces an LNP query to determine whether the LNP database indicates the subscriber’s DN is ported out or not.

If the LNP query returns an RN for a different switch, then the subscriber has ported out. In this case, if the switch performs ODBR queries, then the call is routed onward to the recipient switch; otherwise, if the switch is configured for QoR queries, then the donor switch sends backward REL with the QoR cause code.

If the LNP query does not find an RN, or returns the RN of this switch, then the subscriber is not ported yet (or has ported out and back in again), so the call is routed to the subscriber.

The subscriber-based LNP trigger makes it easy for the operator because configuring of the subscriber ported status is not required to be synchronized with the porting window. The operator sets the subscriber query (LNP-TRIGGER) flag in advance of the porting time window and can set the subscriber STATUS to PORTED-OUT sometime later, after the porting.

Note

The LNP-TRIGGER flag is not applicable for ACQ.

Example 1: QoR Donor Transition Period

Figure 2-10 and Figure 2-11 illustrate a call scenario for a QoR donor transition period. In Figure 2-10, the subscriber is ported out, the LNP-TRIGGER token has been set to Y, and the local database has no entry.
1. The originating switch sends an IAM to the donor switch with NOA=3 and DN=7034841000.

2. In the DN2subscriber table on the donor switch, STATUS=ASSIGNED and LNP-TRIGGER=Y. Since the LNP-TRIGGER=Y, the donor switch performs a query.

3. The query does not return a RN to the donor switch, indicating that the subscriber is not yet ported out.

4. The donor switch routes the call to the local subscriber.
Example 2: QOR Donor Transition Period

In Figure 2-11, it is after the start of the porting window. The subscriber is ported out, and the LNP-TRIGGER token has been set to Y. The local database now shows the subscriber as ported out (contains an RN for the subscriber).

Figure 2-11   After Subscriber Porting

1. The originating switch sends an IAM to the donor switch with NOA=3 and DN=7034841000.
2. In the DN2subscriber table on the donor switch, STATUS=ASSIGNED and LNP-TRIGGER=Y. Since the LNP-TRIGGER=Y, the donor switch performs a query.
3. The query returns RN=4003.
4. The donor switch sends REL cause QoR: Ported Number (14) to the originating switch.
5. The originating switch performs an LNP query of it’s local database.
6. The query returns RN of the recipient switch.
7. The originating switch sends an IAM to the recipient switch.
Precedence of Query Types

Operators can choose different options among ACQ, ODBR, QoR, or a combination of these. Countries starting with only ODBR or QoR may eventually transition to ACQ as more numbers become ported. Therefore, during the transition, a given network or switch may be a combination of ACQ plus QoR or ACQ plus ODBR.

The BTS LNP Profile tokens for ALL-CALLS-QUERY (ACQ), ONWARD-CALL-ROUTING (ODBR), and QUERY-ON-RELEASE (QoR) give the operator complete flexibility to configure the BTS for any possible combination in a mixed network by simply changing the LNP Profile tokens.

In general, ACQ takes precedence over ODBR, which takes precedence over QoR, and finally LNP-TRIGGER. Note that a query due to ODBR or QoR requires the called DN status, in the dn2subscriber table, to be PORTED-OUT. Note that for a query to result from LNP-TRIGGER=Y, the dn2subscriber status cannot be PORTED-OUT (and either the ONWARD-CALL-ROUTING or QUERY-ON-RELEASE must be Y).

Table 2-3 illustrates query type precedence. The first five columns indicate configuration values, and the last four columns indicate whether a query is performed or another action, such as sending a REL for QoR, on the respective originating, intermediate, donor, and recipient switches. Note the following for Table 2-3:

- N values (for example, LNP Profile table ALL-CALL-QUERY=N) is shown as a blank cell in the table, to improve readability.
- ODBR indicates an all call query is performed, and the call is routed onward to the recipient switch.
- REL indicates the donor switch detects that the subscriber is ported-out, so the call is cleared (REL with cause QoR: Ported Number (14)).
- REL QOR indicates the originating switch receives REL with cause QoR: Ported Number (14), does a query, and routes the call onward to the recipient switch.
### Table 2-3  Precedence of Query Matrix

<table>
<thead>
<tr>
<th>LNP Profile ALL-CALL-QUERY</th>
<th>LNP Profile ONWARD-CALL ROUTING</th>
<th>LNP Profile QUERY-ON-RELEASE</th>
<th>DN2SUBSCRIBER status PORTED-OUT</th>
<th>DN2SUBSCRIBER LNP-TRIGGER (and not PORTED-OUT)</th>
<th>Trunk Grp PERFORM LNP-QUERY</th>
<th>Originating Switch Query?</th>
<th>Intermediating Switch Query?</th>
<th>Donor Switch Query?</th>
<th>Recipient Switch Query?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td></td>
<td>ACQ</td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>ACQ</td>
<td></td>
<td></td>
<td></td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
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<td></td>
<td>ACQ</td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td>ACQ</td>
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<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>ACQ</td>
<td></td>
<td></td>
<td></td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

**Note 1:** case A: Donor switch dn2subscriber LNP-TRIGGER=Y and dn2subscriber STATUS=PORTED-OUT with ONWARD-CALL-ROUTING=Y: ODBR query. If query result returns an RN, then the if the RN is for another switch the call routed onward to the recipient switch; otherwise, the call cannot be routed to the ported-out subscriber, so the call fails with unallocated number cause.

case B: Donor switch dn2subscriber table LNP-TRIGGER=Y and dn2subscriber table STATUS=ASSIGNED with ONWARD-CALL-ROUTING=Y: LNP-TRIGGER query. If query result returns an RN, then if the RN is for another switch the call routed onward to the recipient switch; otherwise, the call is routed to the local subscriber.

**Note 2:** case A: Donor switch dn2subscriber table LNP-TRIGGER=Y with QUERY-ON-RELEASE=Y and dn2subscriber STATUS=PORTED-OUT: Call is cleared backward with REL and QOR: ported number cause.

case B: Donor switch dn2subscriber table LNP-TRIGGER=Y with QUERY-ON-RELEASE=Y and dn2subscriber table STATUS=ASSIGNED: LNP-TRIGGER query. If query result returns any RN or other switch, then the call is failed with QoR release cause such as unallocated number (not cause QoR: Ported Number (14)). Otherwise, an attempt is made to route the call to the local subscriber.

**Note 3:** Donor switch dn2subscriber LNP-TRIGGER=Y, but not ODBR or QoR. Route call to subscriber with no query.
Dial Plan and Nature of Address Routing

In some countries, there may be an overlap between the RNs and the beginning digits of a DN, that is, the beginning digits of an RN and DN may be the same. The NOA is used to distinguish a DN from a concatenated RN + DN combination. A new capability, NOA routing, is added to the BTS 10200 for LNP in order to associate different dial plans for DN routing and RN routing.

Normal dial plans for subscriber and trunk originations are used to route to DNs. The new NOA Route table contains ported NOA values and destination IDs which point to RN dial plans.

Examples illustrating NOA routing are provided below. For the dial plan used for the subscriber or trunk origination, the dial-plan-profile table new NOA-ROUTING field is set to 'Y', with an associated NOA-ROUTE-PROFILE-ID. The new NOA Route table associated with the NOA Route Profile table has entries for the ported NOA. The NOA Route ITU Q.769 value ‘8’, specified as PORTED-NUMBER-WITH-RN in the NOA Route table entry). If a matching NOA is found in the NOA ROUTING table, then the destination in the NOA Routing entry is used to route the call, and possibly point to a new dial plan for routing based on the RN. The following call scenarios show how this works:

Normal routing for Called Party Number with a Non-Ported Nature of Address with Directory Number

An incoming trunk call is received with the Called Party Number containing the NOA associated with a DN. There will be no matching entry in the NOA Route entry. The normal dial-plan associated with the incoming trunk group is used to route the call.

Routing Number Routing for Called Party Number With Ported Nature of Number and Routing Number + Directory Number

An incoming trunk call is received with the Called Party Number containing the NOA associated with a ported DN. There will be a matching entry in the NOA Route entry and a destination ID. That is, the NOA Route entry with NOA of PORTED-NUMBER-WITH-RN (which is the value associated with NOA ITU Q.769 value 8). This destination ID may then contain a dial-plan ID for a dial plan for RN routing.

Local Number Portability Query Returns Routing Number for Ported Directory Number

When the BTS 10200 performs an LNP query and finds an RN for a ported number that is not in this switch, the call is routed onward. The dial-plan-profile associated with the originating subscriber or trunk has NOA-ROUTING=Y, and the NOA Route Profile ID of the NOA Route that contains a destination ID. Note that for a country such as France, which uses an RN prefix but with a standard NOA (3, National), after an LNP query on the BTS 10200, digit manipulation must be used to replace the NOA value ported-number with RN value to national.
Cluster Routing

A cluster is defined as two or more Cable Management Servers (CMSs) along with Media Gateway Controllers (MGCs) (or combined CMS/MGCs) deployed within a network. The cluster appears as one logical CMS/MGC looking towards the Public Switched Telephony Network (PSTN). The following assumptions are made:

- Each CMS, MGC, or combined CMS/MGC has its own SS7 Point Code.
- A Trunk Group cannot be split across multiple MGCs.
- All CMSs within a cluster share a common Location Routing Number (LRN) (referred as Cluster LRN)
- The npa-nxx of the ported-in numbers is not split across multiple CMSs (unless there is a NRS in the network)
- The subscriber DNs cannot be ported-out within a cluster.

A Cluster LRN is a shared LRN across multiple CMS/MGCs within a cluster.

When a call with cluster LRN is received by one of the CMSs (or MGCs) within a Cluster, the call is routed to the terminating CMS by a SIP route proxy with ENUM querying capability or by the npa-nxx of the called number.

For Automatic Recall (AR) and Automatic Callback (AC) feature support, the ITP will performs 6-digit GTT (npa-nxx) to route AR or AC requests to the appropriate CMS.

The CLRN is treated as admin-DN for purposes of NRUF reporting.

Figure 2-12 illustrates the cluster routing scenarios.
Subscriber Originated Call at CMS

When a subscriber originates a call and the dialed DN is not within the CMS, the call processing logic performs an LNP query if required. Here are the call processing steps:

**Step 1** If dialed DN exists in the Dn2Subscriber table and unconditional LNP Trigger is not set and status not equal to ported-out, then complete the call locally to the dialed DN. If status is not equal to assigned, then provide necessary treatment (e.g. changed number, disconnect number, etc.).

**Step 2** If dialed DN exists in the Dn2Subscriber table with unconditional LNP Trigger set (LNP-TRIGGER=Y), then perform LNP query.

- If received LRN is MY-LRN or CLRN, then complete the call locally to the dialed DN else route the calls based on the LRN.

- If no LRN is returned and route-type=SUB in the Destination table, then complete the call locally to the dialed DN else route the call based on the Dialed DN.

**Step 3** If dialed DN exists in Dn2Subscriber table and status = ported-out, then perform LNP query. The call is routed based on the received LRN. If My-LRN or CLRN is received, treat it as an error condition.

**Step 4** If dialed DN does not exist in the BTS (after an LNP query is completed), the LRN Type is MY-LRN and the call is rejected.

**Step 5** If dialed the DN does not exist in the BTS and the ROUTE-TYPE=SUB in the Destination table, then provide unallocated number treatment.
### Routing Types

#### Step 6
If dialed DN does not exist in BTS and LRN Type is CLRN, then call is routed based on the dialed DN and not the CLRN. If Cluster Dial Plan ID is provisioned, then retranslate the call based on npa-nxx of the dialed number using Cluster Dial Plan ID. Otherwise route the calls based on the original Dial Plan ID.

#### Note
If a SIP route proxy is included in the cluster, then Cluster Dial Plan ID is not required. The subscriber dial plan ID should point all outgoing calls towards the SIP route proxy.

#### Note
In any case, the call should be routed with LNP information (M-bit, GAP, RN).

#### Step 7
If the dialed DN does not exist in BTS and,
- If the received LRN is not MY-LRN or CLRN, then the call is routed based on the received LRN.
- If and LNP query is performed, but no LRN is received, then the call is routed based on the dialed number.
- If no LNP query is performed, then the call is routed based on the dialed number

#### Note
For information on CMS-to-MGC routing, see the “LERG, TNS, and Additional SIP Extensions for CMS-MGC Separation” section on page 3-25.

### Call Processing at Terminating CMS/MGC

Here are the call processing steps at the terminating CMS (or combined CMS/MGC):

#### Step 1
When an inbound call is received over an intra-cluster TG and the LRN Type is MY-LRN or CLRN, and DN appears in the DN2Subscriber table, then complete the call locally.

#### Step 2
When an inbound call is received over an intra-cluster TG and LRN Type is MY-LRN or CLRN and DN does not appear in the DN2Subscriber table, and the ROUTE-TYPE does not equal SUB, then return cause code (26), misrouted ported number.

#### Step 3
When an inbound call is received over an intra-cluster TG with MY-LRN or CLRN, and DN does not appear in the DN2Subscriber table, and the ROUTE-TYPE equals SUB, then return cause code (1), unallocated number.

#### Step 4
When an inbound call is received over an intra-cluster TG and LRN Type is NOT MY-LRN or CLRN, then route the call based on the Called Party Number (CdPN).

#### Step 5
When an inbound call is received over an offnet TG and LNP query has not been performed by the originating CMS, then the MGC performs an LNP query if required. The calls are routed as specified in the Inbound Call Processing at MGC from PSTN section.
Inbound Call Processing at MGC from PSTN

Note

IntraCluster TG flag is NOT set here.

The call processing steps at an MGC are very similar to those for the originating CMS. The call routing is configured based on the origin of the call. If the call originates from PSTN, configure the BTS as follows:

Step 1
If CLRN is received and the dialed DN (GAP number) exists in the DN2Subscriber table, then terminate the call locally.

Step 2
If CLRN is received, route the call based on the npa-nxx of the dialed DN (GAP number) using Cluster Dial Plan ID if exists or the original dial plan ID assigned to the inbound TG.

Step 3
If an MY-LRN is received, then the dialed DN must belong to the BTS. Terminate the call to the dialed DN within the BTS (existing processing).

Step 4
If no LRN is received, route the call based on the npa-nxx of the CdPN.

Step 5
If an inbound call is received from PSTN and LNP query has not been performed, the MGC performs an LNP query if required. The calls are routed as follows:

- If CLRN is received, then see Steps 1 and 2.
- If MY-LRN is received, see Step 3.
- If no-LRN is received, see Step 4.
- If LRN TYPE is NOT MY-LRN or CLRN, the call is routed based on the received LRN.

Note

If the digits could not be found in the cluster dial plan or the default dial plan, the call is torn down.

Support for ietf Trunk Group Draft

The BTS is enhanced to support standards-based TGID for SIP trunks without affecting the existing proprietary TGID feature. The draft-ietf-iptel-trunk-group-08.txt specifies support for both originating and terminating trunk groups. Only originating trunk groups are supported in BTS Release 5.0. The originating trunk group is specified in the trunk group parameter in a SIP contact header.

Define DN as a Cluster LRN

A the DN status = CLRN is defined in the Dn2Subscriber table. The CLRN indicates to call processing that this is a cluster LRN (CLRN).
DN2Subscriber

The Element Management System (EMS) automatically generates this table. A user can show data or change the Status field to VACANT if it is in the disconnected (DISC) or connected (CN) state. The DN2Subscriber table determines the subscriber ID of a DN during termination processing. The table is populated when a subscriber DN is added to the Subscriber table. The table is queried when the called number is translated using the dial plan and the type of subscriber field indicates Subscriber, that is, it takes a DN and maps it to a subscriber. The DN2Subscriber table also consists of the administrative status of the DN. The DN can be in one of the states described in Table 2-4.

### Table 2-4 DN States

<table>
<thead>
<tr>
<th>State</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>VACANT</td>
<td>The DN is unassigned. An Unassigned DN announcement is played. A typical announcement is “The number you dialed is not in service. Please check the number and try again.” The cause code for this state is #1.</td>
</tr>
<tr>
<td>ASSIGNED</td>
<td>The DN is assigned to a subscriber.</td>
</tr>
<tr>
<td>CN</td>
<td>The DN status is marked as changed number (CN) when the subscriber requests a new number. A Changed Number announcement is played in this state. A typical announcement is “The called number has changed, the new number is ….” The cause code for this state is #22.</td>
</tr>
<tr>
<td>DISC</td>
<td>The DN is disconnected. A Disconnected Number announcement plays. A typical announcement is “We’re sorry, you have reached a number that has been disconnected or is no longer in service…” The cause code for this state is #27.</td>
</tr>
<tr>
<td>LRN</td>
<td>The DN has been reserved as an Location Routing Number (LRN) on this Call Agent.</td>
</tr>
<tr>
<td>RACF-DN</td>
<td>The DN has been reserved for remote activation of call forwarding (RACF) feature.</td>
</tr>
<tr>
<td>TEST-LINE</td>
<td>The DN has been assigned to a test line.</td>
</tr>
<tr>
<td>ANNC</td>
<td>The DN points to an announcement (ANNC) ID.</td>
</tr>
<tr>
<td>PORTED-OUT</td>
<td>The subscriber ported (moved) out of the Call Agent and chose to keep their DN (local number portability).</td>
</tr>
</tbody>
</table>

Table Name: DN2SUBSCRIBER
Table Containment Area: EMS, CA, FSPTC

Command Types

| add, audit, change, delete, help, show, sync |

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.
Examples
For the following commands, enter all 10 digits of the subscriber DN. While the DN token in this table uses only the last four digits for DN purposes, the first six are converted for the office-code-index.

```
show dn2subscriber office-code-index=6; dn=2355;
show dn2subscriber start-time=yyyy-mm-dd; end-time=yyyy-mm-dd; (shows all records with the specified date or earlier)
add dn2subscriber office-code-index=6; dn=2355; status=annc; annc-id=250;
change dn2subscriber office-code-index=6; dn=2355; status=vacant;
delete dn2subscriber office-code-index=6; dn=2355;
delete dn2subscriber status=disc; start-time=yyyy-mm-dd; end-time=yyyy-mm-dd; (deletes all records within the specified range)
```

Usage Guidelines
Primary Key Token(s): office-code-index, dn
Foreign Key Token(s): office-code-index, annc-id, sub-id
Add Rules: ported-out status only if npa-nxx appears in the ported-office-code table.
Delete Rules: office-code-index must exist.
Range Provisioning Rules:

<table>
<thead>
<tr>
<th>STATUS</th>
<th>VACANT</th>
<th>The SUB-ID must be NULL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unassigned DN.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ASSIGNED (System Generated)</strong></td>
<td><strong>SUB-ID is NOT NULL</strong></td>
</tr>
<tr>
<td></td>
<td>DN is assigned; check the subscriber data to see the status.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CN</strong></td>
<td>The SUB-ID must be NULL</td>
</tr>
<tr>
<td></td>
<td>Changed Number.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>DISC</strong></td>
<td>The SUB-ID must be NULL</td>
</tr>
<tr>
<td></td>
<td>Disconnected number.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>LRN</strong></td>
<td>The SUB-ID must be NULL</td>
</tr>
<tr>
<td></td>
<td>Location Routing Number. If DN is assigned as an LRN, use the GAP parameter to complete call.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CLRN</strong></td>
<td>The SUB-ID must be NULL</td>
</tr>
<tr>
<td></td>
<td>Cluster LRN.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>RACF-DN</strong></td>
<td>The SUB-ID must be <strong>NOT NULL</strong></td>
</tr>
<tr>
<td></td>
<td>DN for remote activation of Call Forwarding.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TEST-LINE</strong></td>
<td>The SUB-ID must be NULL</td>
</tr>
<tr>
<td></td>
<td>DN assigned to test lines.</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 2  Routing

Routing Types

Other Rules:
- When fdn, from-dn, and to-dn are specified, office-code-index and dn are not required.
- Use fdn to specify a single DN.
- Use from-dn and to-dn to specify a range of up to 100 DNs.

PBX-DID Provisioning
To provision PBX-DID subscribers, the DN2Subscriber table must be manually provisioned. The DN2Subscriber table can support groups of 10, 100, 1000, or 10,000 directory numbers. The format of the DN is nnnn where n = 0–9. To provide a range of DNs, replace n with a lowercase x. If the last digit is replaced with an x, it represents a group of 10 DNs. An xx represents 100 DNs, xxx represents 1000 DNs, and xxxx represents 10,000 DNs.

Examples:
- add dn2subscriber office-code-index=1; DN=xxxx; sub-id=pbx1@ca1.cisco.com; (10,000 DNs)
- add dn2subscriber office-code-index=1; DN=2xxx; sub-id=pbx1@ca1.cisco.com; (1,000 DNs)
- add dn2subscriber office-code-index=1; DN=23xx; sub-id=pbx1@ca1.cisco.com; (100 DNs)
- add dn2subscriber office-code-index=1; DN=235x; sub-id=pbx1@ca1.cisco.com; (10 DNs)
### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
<th>Valid for Command(s)</th>
<th>Default Value</th>
<th>Possible Values</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMIN_DN</td>
<td>Specifies an administrative DN. If set, it is considered an administrative DN and used for Number Resource Utilization and Forecast (NRUF) reporting. This token can also be set if the DN is assigned as a virtual number for the Multiple Directory Number (MDN) feature. DNs whose status in the DN2 Subscriber table is one of the following are considered administrative DNs: LRN—Location Routing Number. DN is assigned as an LRN. TEST-LINE—DN is assigned to a test line. ANNNC—DN is assigned to an announcement. CHAR(1): Y/N (Default = N).</td>
<td>show</td>
<td>N</td>
<td>Y, N</td>
<td>BooleanParser</td>
</tr>
<tr>
<td>ANNC_ID</td>
<td>Mandatory if status = annnc. Foreign key: Announcement table. Announcement ID associated with the dialed DN. Must match ID in the Announcement table. If status = annnc then annnc-id cannot be null—else it must be null. SMALLINT: 1-1000.</td>
<td>add, change, show</td>
<td></td>
<td>[1_1000]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td>AUTO_REFRESH</td>
<td>Specifies whether to display cached data on the screen. CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.</td>
<td>show</td>
<td>Y</td>
<td>Y, N</td>
<td>BooleanParser</td>
</tr>
<tr>
<td>CWT_TYPE</td>
<td>Call Waiting Tone type. For Multiple DN (MDN) feature, a different Call Waiting Tone Type can be assigned to each DN. VARCHAR(8): WT1, WT2, WT3, WT4 (Default = WT1).</td>
<td>add, change, show, sync, audit</td>
<td>WT1</td>
<td>WT1, WT2, WT3, WT4</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
| **DISPLAY** | Description: Specifies what token information to display on the screen.  
VARCHARG(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.  
Valid for Command: show  
Possible Value: [1_1024]  
Parser: TextParser |
| --- | --- |
| **DN** | Description: Mandatory if from-dn, to-dn or fdn is not specified. Primary key. Last one to four digits of the directory number assigned to a subscriber in the Subscriber table. These become the DNs for that particular Call Agent.  
CHAR(4): 1-4 characters in one of the following formats:  
For one digit: n or x.  
For two digits: nn, nx, or xx.  
For three digits: nnn, nnx, nxx, or xxx.  
For four digits: nnnn, nnxx, nxxx, or nxxx.  
Where n = numeric digit 0-9, and x (x is lowercase) is used as a wildcard representing a group of 10, 100, or 1000 DNs.  
Valid for Command: change, show, add, delete  
Possible Value: [1_4]  
Parser: PbxDnParser |
| **END_TIME** | Description: Valid only for show and delete commands. Used to show or delete a range of records that were created or modified based on the LAST-CHANGED token.  
DATE: YYYY-MM-DD  
Valid for Command: show, delete  
Possible Value: [10_10]  
Parser: DateParser |
| **FDN** | Description: The full DN.  
VARCHARG(16): 1-16 numeric digits.  
Valid for Command: change, show, add, delete  
Possible Value: [1_14]  
Parser: GenericDNParser |
| **FROM_DN** | Description: The from DN. Used with the to-dn token to provision a range of DNs.  
VARCHARG(16): 1-16 numeric digits.  
Valid for Command: change, add, delete  
Possible Value: [1_14]  
Parser: GenericDNParser |
| **LIMIT** | Description: Specifies the number of rows to display on the screen.  
 INTEGER: 1-100000000 (Default = 100000000).  
 Valid for Command: show  
 Default Value: 100000000  
 Possible Value: [1_100000000]  
 Parser: DecimalParser |
|----------------|--------------------------------------------------------------------------------------------------|
| **LNP_TRIGGER** | Description: If set (Y), perform LNP query. The Lnp-trigger is also called an unconditional LNP trigger. When this token is set, the Cisco BTS 10200 Softswitch unconditionally performs an LNP query. The call is routed based on the LNP response. The lnp-trigger is used during the transition period when a DN is in-transition to be ported-in or ported-out.  
 CHAR(1): Y/N (Default = N).  
 Valid for Command: change, show  
 Default Value: N  
 Possible Value: Y, N  
 Parser: BooleanParser |
| **MASTER** | Valid for Command: sync  
 Mandatory: sync  
 Possible Value: [1_10]  
 Parser: TextParser |
| **NP_RESERVED** | Description: Supports LNP and Number Pooling. If a call is received with the switch LRN and the GAP parameter containing an NP-reserved number, the switch provides the following treatments:  
 CHAR(1): Y/N (Default = N).  
 Valid for Command: add, change, audit, sync, show  
 Default Value: N  
 Possible Value: Y, N  
 Parser: BooleanParser |
| **OFFICE_CODE_INDEX** | Description: Primary key. Foreign key: Office Code table. First six digits of the DN are converted to office-code-index.  
 SMALLINT: 1-65535.  
 Valid for Command: show, change, add, delete  
 Possible Value: [1_65535]  
 Parser: DecimalParser |
| **ORDER** | Description: Specifies whether to display data on the screen in a sorted order.  
VARCHAR(1024): 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.  
Valid for Command: show  
Possible Value: [1_1024]  
Parser: TextParser |
| --- | --- |
| **PLATFORM_STATE** | Description: Audits a shared memory database.  
VARCHAR(7): 1-7 ASCII characters. Permitted values are:  
ACTIVE (Default) - System is currently running.  
STANDBY.  
Valid for Command: sync, audit  
Default Value: ACTIVE  
Possible Value: ACTIVE, STANDBY  
Parser: TextParser |
| **PORTED_IN** | Description: Automatically provisioned when the subscriber is provisioned as ported-in=Y. Not provisionable in this table.  
CHAR(1): Y/N (Default = N).  
Valid for Command: show  
Default Value: N  
Possible Value: Y, N  
Parser: BooleanParser |
| **RING_TYPE** | Description: Specifies the ring type based on the dialed DN.  
CHAR(1): R1-R8 (Default = R1).  
Values are:  
R1—2 seconds ringing, 4 seconds off  
R2—.5 seconds ringing, .5 seconds ringing, 4 seconds off  
R3—.5 seconds ringing, .5s ringing, .5 seconds ringing, 4 seconds off  
R4—.3 seconds ringing, .2 seconds ringing, .3 seconds ringing, 4 seconds off  
R5—.5 seconds ringing, 6 seconds off  
R6—.5 seconds ringing, 1 second ringing, .5 seconds ringing, 4 seconds off  
R7—.5 seconds ringing, 6 seconds off  
Valid for Command: add, change, show, sync, audit  
Default Value: R1  
Possible Value: R0, R1, R2, R3, R4, R5, R6, R7  
Parser: TextParser |
START_ROW
Description: Specifies to begin displaying data on the screen at a specific row.
INTEGER: 1-100000000 (Default = 1).
Valid for Command: show
Default Value: 1
Possible Value: [1_100000000]
Parser: DecimalParser

START_TIME
Description: Valid only for show and delete commands. Delete command is valid only if status = CN | DISC. Used to show or delete a range of records that were created or modified based on the LAST-CHANGED token.
DATE: YYYY-MM-DD.
Valid for Command: show, delete
Possible Value: [10_10]
Parser: DateParser

STATUS
Description: Status can only be changed to vacant (unassigned). The rest of the values are system-generated by the EMS. Changing a status to unassigned links it to an announcement.
The following tokens can be added, changed, or deleted:
VARCHAR(11): 1-11 ASCII characters. Permitted values are:
VACANT—Unassigned DN.
ASSIGNED (System generated)—DN is assigned; check the subscriber data to see the status.
CLRN—Cluster LRN. If CLRN, the dialed DN can be on this Cisco BTS 10200 Softswitch or any other CMS within the Cluster.
CN—Changed number.
DISC—Disconnected number.
LRN—Location Routing Number. If DN is assigned as an LRN, use GAP parameter to complete the call.
TEST-LINE—DN assigned to test lines.
ANNC—DN points to an announcement.
PORTED-OUT—DN has ported out of the Call Agent. Ported-out status occurs only if NPA-NXX appears in the ported-office-code table.
Valid for Command: add, change, show
Mandatory: add
Default Value: ASSIGNED
Possible Value: VACANT, ASSIGNED, CN, DISC, LRN, TEST_LINE, ANNC, PORTED_OUT, CLRN
Parser: TextParser
When the dialed number is recognized as an intracluster DN (based on the returned LRN), the call is routed within the cluster by translating the npa-nxx of the dialed DN by means of the cluster Dial Plan ID. The cluster Dial Plan ID is defined in the CA_CONFIG table.

---

### Define Cluster Dial Plan ID

When the dialed number is recognized as an intracluster DN (based on the returned LRN), the call is routed within the cluster by translating the npa-nxx of the dialed DN by means of the cluster Dial Plan ID. The cluster Dial Plan ID is defined in the CA_CONFIG table.
Call Agent Configuration

The Call Agent Configuration (ca-config) table defines the values a service provider is allowed to change. The Call Agent Configuration Base defines the defaults for each Call Agent and is used unless the Call Agent Configuration table is added with a different value. See Appendix A, “Call Agent and Feature Server Configurable Parameters” for the values that can be changed.

Table Name: CA_CONFIG
Table Containment Area: EMS, CA, FSPTC, FSAIN

Examples

show ca-config type=susp-tmr;
add ca-config type=susp-tmr; datatype=integer; value=250;
change ca-config type=susp-tmr; datatype=integer; value=200;
change ca-config type=batch-mode-supp; value=Y;
change ca-config type=batch-latency; value=240;
delete ca-config type=susp-tmr;

Usage Guidelines

Primary Key Token(s): TYPE

Syntax Description

AUTO_REFRESH

Description: Specifies whether to display cached data on the screen.
CHAR(1): Y/N (Default = Y).
Y—Queries the database for the most current data.
N—Queries the database for the most current data only if the cached data is unavailable.
Valid for Command: show
Default Value: Y
Possible Value: Y, N
Parser: BooleanParser

DATATYPE

Valid for Command: add, show, change, audit, sync
Possible Value: BOOLEAN, INTEGER, STRING, DIGITS
Parser: TextParser.toUpperCase()

DISPLAY

Description: Specifies what token information to display on the screen.
VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
Valid for Command: show
Possible Value: [1_1024]
Parser: TextParser
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Type</th>
<th>Default Value</th>
<th>Possible Values</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMIT</td>
<td>Specifies the number of rows to display on the screen.</td>
<td>INTEGER</td>
<td>100000000 (Default)</td>
<td>[1_100000000]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td>MASTER</td>
<td>Valid for Command: sync</td>
<td></td>
<td>sync</td>
<td>[1_10]</td>
<td>TextParser</td>
</tr>
<tr>
<td>ORDER</td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
<td>VARCHAR(51200)</td>
<td>all rows are displayed</td>
<td>[1_1024]</td>
<td>TextParser</td>
</tr>
<tr>
<td>PLATFORM_STATE</td>
<td>Audits a shared memory database.</td>
<td>VARCHAR(7)</td>
<td>ACTIVE (Default)</td>
<td>ACTIVE, STANDBY</td>
<td>TextParser</td>
</tr>
<tr>
<td>START_ROW</td>
<td>Specifies to begin displaying data on the screen at a specific row.</td>
<td>INTEGER</td>
<td>1 (Default)</td>
<td>[1_100000000]</td>
<td>DecimalParser</td>
</tr>
</tbody>
</table>
### TARGET

**Description:** Specifies the network element to receive the request.

**VARCHAR(5):** 1-5 ASCII characters. Permitted values are:

- **CA:** Network identifier of a Call Agent.
- **FSPTC (POTS/Tandem/Centrex Feature Server):** Network identifier of a specific Feature Server.
- **FSAIN (AIN Feature Server):** Network identifier of AIN Feature Servers.

**Valid for Command:** sync

**Mandatory:** sync

**Possible Value:** [1_10]

**Parser:** TextParser
**Routing Types**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Description: Mandatory for the change command. Specifies what measurements the traffic subsystem supports.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIN-SVC</td>
<td>Advanced Intelligent Network server</td>
</tr>
<tr>
<td>AIN-TOOLS</td>
<td>Advanced Intelligent Network tools</td>
</tr>
<tr>
<td>ANM</td>
<td>Announcement Module</td>
</tr>
<tr>
<td>AUDIT</td>
<td>Audit BILLING—Billing</td>
</tr>
<tr>
<td>CALLP</td>
<td>Call Processing</td>
</tr>
<tr>
<td>CALL-TOOLS</td>
<td>Call tools</td>
</tr>
<tr>
<td>CPU</td>
<td>Computer Processor Unit</td>
</tr>
<tr>
<td>DISK</td>
<td>Disk drive Disk drive input/output</td>
</tr>
<tr>
<td>DQOS</td>
<td>Dynamic Quality of Service</td>
</tr>
<tr>
<td>EM</td>
<td>Event Messaging (Billing) H323—H.323 INAP—Intelligent Network Application Protocol</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
<tr>
<td>ISUP</td>
<td>ISDN User Part (SS7)</td>
</tr>
<tr>
<td>M3UA</td>
<td>M3UA signaling protocol</td>
</tr>
<tr>
<td>MEMORY</td>
<td>System memory</td>
</tr>
<tr>
<td>MGCP</td>
<td>Media Gateway Control Protocol</td>
</tr>
<tr>
<td>NETWORK_IO</td>
<td>Network input/output</td>
</tr>
<tr>
<td>PCT-TOOLS</td>
<td>PCT tools</td>
</tr>
<tr>
<td>POTS-FS</td>
<td>POTS Feature Server</td>
</tr>
<tr>
<td>SCCP</td>
<td>Signaling Connection Control Part protocol</td>
</tr>
<tr>
<td>SCTP</td>
<td>SCTP signaling protocol</td>
</tr>
<tr>
<td>SIA</td>
<td>SIP interface adapter</td>
</tr>
<tr>
<td>SIM</td>
<td>Service Interaction Manager</td>
</tr>
<tr>
<td>SNMP</td>
<td>Signaling Network Management Protocol</td>
</tr>
<tr>
<td>SUA</td>
<td>SUA signaling protocol</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>System TCAP—Transactional Capabilities Application Part protocol</td>
</tr>
<tr>
<td>TG-USG</td>
<td>Trunk Group usage TSA—TCAP Signaling Adapter (TSA) application</td>
</tr>
<tr>
<td>TSA</td>
<td>TCAP Signaling Adapter (TSA)</td>
</tr>
</tbody>
</table>

Valid for Command: add, show, change, delete, audit, sync

Mandatory: add, change, delete

Possible Value: [1_50]

Parser: TextParser.toUpperCase()
Define Intra-cluster TG Flag

The intracluster TG flag is defined in the Trunk Group table. When this flag is set, and calls with MY-LRN or CLRN are received over this TG, the BTS should not reroute the calls to another BTS or to SIP Route Proxy if the DN is not found. Instead, it should return a cause code 1 or 26. For Trunk Group table details, refer to the “Trunk Group” section on page 1-82.

Softswitch Trunk Group Profile Table

The SEND-STD-TRK-GRP-URI token is used to indicate if the trunk group parameters defined by draft-ietf-iptell-trunk-group should be used when an INVITE request and the trunk_sub_grp_type field is set to TGID. The default value is N.

Softswitch Trunk Group Profile

The Softswitch Trunk Group Profile (softsw-tg-profile) table holds all the information specific to a Softswitch trunk, such as id, protocol, indicators and echo suppression. The softsw-tg-profile record can be shared by multiple softswitch trunk groups. An ID must be created in this table before entries can be added to the Softswitch Trunk Group table.

Table Name: SOFTSW_TG_PROFILE
Table Containment Area: EMS, CA

Command Types

add, audit, change, delete, help, show, sync

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

show softsw-tg-profile id=softprf1;
add softsw-tg-profile id=softprf1; protocol-type=sip-t;
change softsw-tg-profile id=softprf1; send-cpn=n;
delete softsw-tg-profile id=softprf1;
Usage Guidelines

Primary Key Token(s): ID

Add Rules:
- If protocol-type=sip-t; then sipt-isup-ver must be specified.
- The sipt-isup-ver token must be defined in the SIPT ISUP Version Base table.

Delete Rules: ID cannot exist in any trunk-grp::tg-profile-id where tg-type=softsw.

Syntax Description

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLY_USER_PRIVACY</td>
<td>Specifies whether to apply user privacy.</td>
<td>Y—If the originator requested privacy, aspects of the calling party information (such as the calling name and number in the From:header) in the initial outbound SIP INVITE is hidden. Privacy is requested when either the calling party name or number have presentation restrictions. N—User level privacy is not applied.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUTO_P_A_ID</td>
<td>Preliminary (proposed) Asserted Identity.</td>
<td>Y—Use PAID if received, else treat FROM header as PAID. N—Use FROM header as PAID header.</td>
<td>If the USE_PAI_HDR_FOR_ANI token is set to y, the AUTO_P_A_ID=n setting is over-ridden, and PAID value is used.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUTO_REFRESH</td>
<td>Specifies whether to display cached data on the screen.</td>
<td>Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Type</td>
<td>Default</td>
<td>Possible Values</td>
<td>Command(s)</td>
<td>Parser</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------</td>
<td>---------</td>
<td>----------------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Description: Described by the service provider. VARCHAR(64): 1-64 ASCII characters. Valid for Command: add, change, audit, sync, show Possible Value: [1_64]</td>
<td>TextParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Description: Specifies what token information to display on the screen. VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma. Valid for Command: show Possible Value: [1_1024]</td>
<td>TextParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIVERSION_HEADER_SUPP</td>
<td>Description: Specifies whether SIP Diversion Header is supported or not. This header conveys diversion information from other SIP user agents and proxies to the called user agent. This information can be used for enhanced features, including Unified Messaging, Third-Party voice mail, and Automatic Call Distribution (ACD). The most common use of the Diversion Header in the Cisco BTS 10200 Softswitch is for call forwarding features. CHAR(1): Y/N (Default = N). Valid for Command: add, change, audit, sync, show Default Value: Y Possible Value: Y, N</td>
<td>BooleanParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTMF_RELAY_METHOD</td>
<td>Description: Specifies which way to send an out-of-band DTMF Relay. VARCHAR(8): 1-8 ASCII characters. Permitted values are: NONE (Default)—Unsolicited DTMF Relay - Not supported. NOTIFY—DTMF Relay supported based on Subscribe/Notify Method. INFO—DTMF Relay supported based on INFO Method. Valid for Command: add, audit, change, show, sync Default Value: NONE Possible Value: NONE, NOTIFY, INFO</td>
<td>TextNoCaseParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **ENABLE_CPC_PARAM** | Description: Specifies whether to enable or disable processing of a calling-party category (CPC) extension that is optionally added to the user part of a P-Asserted-ID header. The use-pai-hdr-for-ani token must be enabled for the enable-cpc-param token to be valid. If the use-pai-hdr-for-ani token is set to N, then the enable-cpc-param is ignored.

VARCHAR(16): 1-16 ASCII characters. Permitted values are:
SEND-ONLY—Send CPC in an outgoing INVITE message.
RECV-ONLY—Process CPC from incoming INVITE messages.
SEND-RECV—Send CPC in outgoing INVITE messages and process CPC on incoming INVITE messages.
IGNORE (Default)—Disable CPC send and process.
Valid for Command: add, change, audit, sync, show
Default Value: IGNORE
Possible Value: SEND_ONLY, RECV_ONLY, SEND_RECV, IGNORE
Parser: TextNoCaseParser |
| **ENABLE_CT_PARAM** | Description: Specifies whether to enable or disable the processing of a call type (CT) extension that is optionally added to the user part of the SIP Request URI.

VARCHAR(16): 1-16 ASCII characters. Permitted values are:
SEND-ONLY—Send CT in outgoing INVITE message.
RECV-ONLY—Process CT from incoming INVITE messages.
SEND-RECV—Send CT in outgoing INVITE messages and process CT on incoming INVITE messages.
IGNORE (Default)—Disable CT send and process.
Valid for Command: add, change, audit, sync, show
Default Value: IGNORE
Possible Value: SEND_ONLY, RECV_ONLY, SEND_RECV, IGNORE
Parser: TextNoCaseParser |
### ENABLE_DAI_PARAM

**Description:** Specifies whether to enable or disable the processing of the dial around indicator (DAI) extension that is optionally added to the user part of the SIP Request URI. Please note however that in a Packetcable environment, CMSS 1.5 makes it mandatory to process DAI.

**VARCHAR(16):** 1-16 ASCII characters. Permitted values are:

- **SEND-ONLY**—Send DAI in outgoing INVITE messages.
- **RECV-ONLY**—Process DAI from incoming INVITE messages.
- **SEND-RECV**—Send DAI in outgoing INVITE messages and process DAI on incoming INVITE messages.
- **IGNORE** (Default)—Disable DAI send and process.

Valid for Command: `add`, `change`, `audit`, `sync`, `show`

Default Value: **IGNORE**

Possible Value: **SEND_ONLY**, **RECV_ONLY**, **SEND_RECV**, **IGNORE**

Parser: `TextNoCaseParser`

### ENABLE_EM_EVENTS

**Description:** Specifies whether to generate a Billing Correlation ID (BCID).

**CHAR(1):** Y/N (Default = N).

- **Y**—Generate BCID if em-events-enabled=Y.
- **N**—Do not generate BCID. Assumes CMSS, events not generated.

Valid for Command: `add`, `change`, `audit`, `sync`, `show`

Default Value: **N**

Possible Value: **Y**, **N**

Parser: `BooleanParser`

### ENABLE_ES_EVENTS

**Description:** Specifies whether to send or suppress additional Electronic Surveillance messages towards a DF server for calls that are traversing through a softswitch trunk group.

**CHAR(1):** Y/N (Default = N).

Valid for Command: `add`, `change`, `audit`, `sync`, `show`

Default Value: **N**

Possible Value: **Y**, **N**

Parser: `BooleanParser`
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Type</th>
<th>Default Value</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENABLE_NOA_PARAM</td>
<td>Specifies whether to enable or disable processing of the Nature of Address (NOA) extension that is optionally added to the user part of a SIP Request URI. VARCHAR(16): 1-16 ASCII characters. Permitted values are: SEND-ONLY—Send NOA in outgoing INVITE messages. RECV-ONLY—Process NOA from incoming INVITE messages. SEND-RECV—Send NOA in outgoing INVITE messages and process NOA on incoming INVITE messages. IGNORE (Default)—Disable NOA send and process. Valid for Command: add, change, audit, sync, show.</td>
<td>TEXT_NOCASE_PARSER</td>
<td>IGNORE</td>
<td>SEND_ONLY, RECV_ONLY, SEND_RECV, IGNORE</td>
</tr>
<tr>
<td>ENABLE_P_DCS_BILLING_INFO_HDR</td>
<td>Specifies whether to enable PacketCable Distributed Call Signaling (DCS) billing in a SIP information header. CHAR(1): Y/N (Default = N). Valid for Command: add, change, audit, sync, show.</td>
<td>BOOLEAN_PARSER</td>
<td>N</td>
<td>Y, N</td>
</tr>
<tr>
<td>ENABLE_P_DCS_LAES_HEADER</td>
<td>Specifies whether to send surveillance information as defined in Section 8 of RFC 3603 if required, when it cannot be performed on the switch. Requires that the remote SIP entity interfacing with the SIP trunk support surveillance procedures. CHAR(1): Y/N (Default = N). N—Do not send surveillance information. Y—Send surveillance information. Valid for Command: add, change, audit, sync, show.</td>
<td>BOOLEAN_PARSER</td>
<td>N</td>
<td>Y, N</td>
</tr>
</tbody>
</table>
### Routing Types

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Description</th>
<th>Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENABLE_P_DCS_OSPS_HEADER</strong></td>
<td>Specifies whether to enable PacketCable DCS Operator Services Position System (OSPS) associated call support on a softswitch trunk group. If supported, calls include: busy line verification, emergency interrupt, and 911 operator ringback. When this flag is set and an OSPS related request is made, if this flag is not set, BTS will not send outgoing SIP requests or accept incoming SIP requests that are OSPS related.</td>
<td>CHAR(1): Y / N (Default = N).</td>
<td>BooleanParser</td>
</tr>
<tr>
<td><strong>ENABLE_SIP_TRIGGER</strong></td>
<td>Specifies whether to enable SIP triggers on a SIP trunk group.</td>
<td>CHAR(1): Y / N (Default = N).</td>
<td>BooleanParser</td>
</tr>
<tr>
<td><strong>GTD_MODE</strong></td>
<td>Specifies whether to use the compact (default) or verbose mode to encode messages for the SIP-T/GTD trunk group.</td>
<td>VARCHAR(8): 1-8 ASCII characters. Permitted values are: COMPACT (Default) VERBOSE</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
### Routing Types

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Command:</th>
<th>Default Value</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTD_PARMS</td>
<td>Mandatory if protocol-type=sip-gtd. Specifies a comma-separated list of Generic Transparency Descriptor (GTD) parameters enabled for this profile. The parameters are parsed against a static table, called the GTD Parameter Values table, which lists all the valid GTD parameters, including the special case parameter ALL. In the DBM of the Call Agent, this comma-separated string is converted into a series of boolean flags, one for each GTD parameter. The Call Agent accesses each individual flag as it builds a GTD attachment.</td>
<td>VARCHAR(500)</td>
<td>all</td>
<td>ALL</td>
<td>[1_500]</td>
<td>TextNoCaseParser</td>
</tr>
<tr>
<td></td>
<td>VARCHAR(500): 3-500 ASCII characters. For example:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ALL—use all GTD parameters (or)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CPN, CGN, CIC, CPC, BCI (comma-separated list)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Default Value: ALL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_500]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextNoCaseParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOP_COUNTER_MAX</td>
<td>Applies only to received SIP Invite messages that are not SIP-T and contain a max-forwards value in which the max-forwards is scaled down to build the hop counter. If the hop counter derived from the max-forwards is greater than this value, it is set to this value. This value acts as a ceiling for the derived hop counter value.</td>
<td>INTEGER:</td>
<td>add, change, audit, sync, show</td>
<td>20</td>
<td>[10_20]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td></td>
<td>INTEGER: 10-20 (Default = 20).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Default Value: 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [10_20]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOP_COUNTER_SUPP</td>
<td>Used for received SIP Invite messages that are not SIP-T and contain a max-forwards value. The default sets the hop counter based on the received max-forwards value. If this flag is set to N, the hop counter field is not populated using the max-forwards value.</td>
<td>CHAR(1):</td>
<td>add, change, audit, sync, show</td>
<td>Y</td>
<td>Y, N</td>
<td>BooleanParser</td>
</tr>
<tr>
<td></td>
<td>CHAR(1): Y/N (Default = Y).</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Default Value: Y</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: BooleanParser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Description: Primary key. Unique ID for this trunk group profile.</td>
<td>VARCHAR(16)</td>
<td>add, change, delete</td>
<td></td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, show, delete, audit, sync</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mandatory: add, change, delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_16]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
## Routing Types

### INBAND_TONE_AVAILABLE
- **Description:** Send release or provide tone/announcement.
- **CHAR(1):** Y/N (Default = Y).
- Valid for Command: add, change, audit, sync, show
- Default Value: Y
- Possible Value: Y, N
- Parser: BooleanParser

### LIMIT
- **Description:** Specifies the number of rows to display on the screen.
- **INTEGER:** 1-100000000 (Default = 100000000).
- Valid for Command: show
- Default Value: 100000000
- Possible Value: [1_100000000]
- Parser: DecimalParser

### MASTER
- Valid for Command: sync
- Mandatory: sync
- Possible Value: [1_10]
- Parser: TextParser

### MAX_FORWARDS
- **Description:** Specifies when an outbound SIP Invite message requires an initial maximum forwards value.
- **INTEGER:** 10-80 (Default = 70).
- Valid for Command: add, change, audit, sync, show
- Default Value: 70
- Possible Value: [4_80]
- Parser: DecimalParser

### ORDER
- **Description:** Specifies whether to display data on the screen in a sorted order.
- **VARCHAR(1024):** 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
- Valid for Command: show
- Possible Value: [1_1024]
- Parser: TextParser

### PLATFORM_STATE
- **Description:** Audits a shared memory database.
- **VARCHAR(7):** 1-7 ASCII characters. Permitted values are:
  - ACTIVE (Default) - System is currently running.
  - STANDBY.
- Valid for Command: sync, audit
- Default Value: ACTIVE
- Possible Value: ACTIVE, STANDBY
- Parser: TextParser
<table>
<thead>
<tr>
<th>Token</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRACK_FLAG</td>
<td>Specifies if an Invite messages sent on this trunk group require reliable provisional responses. If yes, provisional responses like alerting are delivered. Used with SIP-T.</td>
<td>CHAR(1): Y/N (Default = N). Valid for Command: add, change, audit, sync, show Default Value: N Possible Value: Y, N Parser: BooleanParser</td>
</tr>
<tr>
<td>PROTOCOL_TYPE</td>
<td>Specifies the type of signaling for this trunk group. It controls the message type sent between two Cisco BTS 10200 Softswitches. For example, if the protocol-type is SIP-T, then the Cisco BTS 10200 Softswitch sends a SIP-T message, which is a normal SIP ASCII message plus an ISUP MIME attachment. In this case, the origination type can be ISDN, SS7, CAS, MGCP, and so forth. The origination type does not matter. However, if the protocol-type is SIP, then the Cisco BTS 10200 Softswitch sends only an ASCII SIP message without an ISUP MIME attachment.</td>
<td>VARCHAR(9): 1-9 ASCII characters. Permitted values are: SIP—Signaling via the Session Initiation Protocol (SIP) multimedia sessions across the Internet. SIP-T—Signaling using SIP-T protocol. SIP-T is an inter Call Agent protocol; SIP-GTD protocol is a normalized inter Call Agent protocol. SIP-T—Signaling using both the SIP-T and SIP-GTD protocol types. SIP-T is an inter Call Agent protocol; SIP-GTD protocol is a normalized inter Call Agent protocol. Valid for Command: add, change, audit, sync, show Mandatory: add Possible Value: SIP, SIP_T Parser: TextParser</td>
</tr>
<tr>
<td>RECV_3XX_USE_CF_METHOD</td>
<td>Specifies how a received 3xx response is handled. Applies only to 3xx responses received with a contact header containing a different number than the called party number in the request, where the domain name identifies the Cisco BTS 10200 Softswitch that sent the request. Feature provisioning is required before enabling this token.</td>
<td>CHAR(1): Y/N (Default = Y). Y—Handle as a network-based reroute. N—Handle as a call forwarding request from the switch sending the 3xx. Valid for Command: add, change, audit, sync, show Default Value: Y Possible Value: Y, N Parser: BooleanParser</td>
</tr>
</tbody>
</table>
### REDIRECT_SUPPORTED

**Description:** Specifies if the Cisco BTS 10200 Softswitch honors a 3xx class, such as a redirection response for an Invite message sent by the Cisco BTS 10200 Softswitch.

*VARCHAR(32):* 1-32 ASCII characters. Permitted values are:

- **VALID-DOMAINS-ONLY** (Default)—If the host name field in the SIP URI of a 3XX contact used for call redirection does not represent this Cisco BTS 10200 Softswitch or a Cisco BTS 10200 Softswitch SIP trunk, then the call is redirected using the SIP trunk used on the previous call redirection. If there was not a previous call redirection, then the SIP trunk that sent the initial Invite is used. If the profile of the selected SIP trunk restricts redirection to only valid domains, then this redirection is blocked and the next contact is tried. Otherwise, it is redirected and the contact URI is used as the request URI of the redirected call.
  - **ALL-DOMAINS**—Redirects to any allowed domain.
  - **NONE**—No redirects allowed.

Valid for Command: add, audit, change, show, sync

Mandatory: add

Default Value: VALID_DOMAINS_ONLY

Possible Value: ALL_DOMAINS, NONE, VALID_DOMAINS_ONLY

Parser: TextParser

### REFER_ALLOWED

**Description:** Call Transfer allowed on an SS trunk.

*CHAR(1):* Y / N (Default = N).

Valid for Command: add, change, audit, sync, show

Default Value: N

Possible Value: Y, N

Parser: BooleanParser

### REFERRED_BY_REQUĐ_ONREFER

**Description:** Specifies whether a “referred-by” header is required on REFER messages.

*CHAR(1):* Y / N (Default = N).

Valid for Command: add, change, audit, sync, show

Default Value: N

Possible Value: Y, N

Parser: BooleanParser
### REPLECES_ALLOWED
**Description:** Specifies whether to accept or reject received INVITE messages with a “replaces” header. Refer to RFC 3891 for more information.

CHAR(1): Y / N (Default = N).
- Y—Accept received INVITE messages with a “replaces” header.
- N—Reject received INVITE messages with a “replaces” header.

Valid for Command: add, change, audit, sync, show

Default Value: N

Possible Value: Y, N

Parser: BooleanParser

### SCALE_FACTOR
**Description:** Used for conversions between hop counter and max-forwards values; allows no-conversion, one-half, one-third, and one-quarter conversion factors. The default provides a scale relative to the maximum values: if the hop counter is 20, a scale factor of 4 converts to a max-forwards value of 80. Using the default means no conversion.

INTEGER: 1-4 (Default = 1).

Valid for Command: add, change, audit, sync, show

Default Value: 1

Possible Value: [1_4]

Parser: DecimalParser

### SEND_302_ON_CF
**Description:** Specifies whether “Send 302 on Call Forwarding” is supported.

CHAR(1): Y/N (Default = N).

Valid for Command: add, change, audit, sync, show

Default Value: N

Possible Value: Y, N

Parser: BooleanParser

### SEND_3XX_DOMAIN_NAME
**Description:** Specifies whether to apply the domain name in the contact header when sending a 3XX response. Applies only if send-302-on-cf is enabled and “call forwarding unavailable” is locally invoked and configured to send a 3XX SIP response. This token does not apply if the Cisco BTS 10200 Softswitch proxies a received 3XX response. For proxies, the domain name in the contact header of the 3XX received is preserved.

VARCHAR(64): 1-64 ASCII characters.

Valid for Command: add, change, audit, sync, show

Possible Value: [1_64]

Parser: DomainParser
<table>
<thead>
<tr>
<th>Token Name</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEND_CIC_PARAM</td>
<td>Specifies whether the CIC parameter is included in the request URL for outbound SIP calls.</td>
<td>CHAR(1): Y/N (Default = Y)</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Default Value: Y</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
<td>Parser: BooleanParser</td>
</tr>
<tr>
<td>SEND_FULL_E164</td>
<td>When enabled, all SIP phone numbers contained in SIP messages sent from the Cisco BTS 10200 Softswitch that have an NOA of national significance are represented as fully qualified E.164 numbers prefixed with the local country code and plus sign. This conforms to IETF RFC 3398 Section 12.1. When disabled, national numbers are sent without a country code and plus sign prefix. Numbers of international significance are always sent with a plus sign and country code regardless of this token setting. The Home Country code is defined in the Call Agent Configuration table.</td>
<td>CHAR(1): Y/N (Default = N).</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Default Value: N</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
<td>Parser: BooleanParser</td>
</tr>
<tr>
<td>SEND_LAES_IN_RESPONSE</td>
<td>Specifies whether the Cisco BTS 10200 Softswitch can include a Lawfully Authorized Electronic Surveillance (LAES) in a 183 Alerting message if a PacketCable call content Internet Access Point (IAP) for Real-Time Transport Protocol (RTP) duplication is not found.</td>
<td>CHAR(1): Y/N (Default = N).</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Default Value: N</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
<td>Parser: BooleanParser</td>
</tr>
<tr>
<td>SEND_PHONE_CONTEXT_PARM</td>
<td>Specifies whether to tag the local telephone number with a telephone context parameter. If send-full-e164 is set, this token is significant for number that cannot be represented in an E.164 format, such as 911.</td>
<td>CHAR(1): Y/N (Default = N).</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Default Value: N</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
<td>Parser: BooleanParser</td>
</tr>
</tbody>
</table>
### SEND_SIP_181_RESP
**Description:** Specifies whether the Cisco BTS 10200 Softswitch transmits a 181 response message to a UAC when the terminating side of the Cisco BTS 10200 Softswitch forwarded the call.

- **CHAR(1):** Y/N (Default = N)
- **Valid for Command:** add, change, audit, sync, show
- **Default Value:** N
- **Possible Value:** Y, N
- **Parser:** BooleanParser

### SEND_STD_TRK_GRP_URI
**Description:** Specifies whether to use draft IETF IP Telephony (iptel) Trunk Group (draft-ietf-iptel-trunk-group) defined trunk group parameters when an INVITE request is received and the trunk-sub-grp-type=TGID.

- **CHAR(1):** Y/N (Default = N).
- **Valid for Command:** add, change, audit, sync, show
- **Default Value:** N
- **Possible Value:** Y, N
- **Parser:** BooleanParser

### SESSION_TIMER_ALLOWED
**Description:** Specifies whether a session timer is allowed.

- **CHAR(1):** Y/N (Default = N).
- **Valid for Command:** add, audit, change, show, sync
- **Default Value:** N
- **Possible Value:** Y, N
- **Parser:** BooleanParser

### SIP_TIMER_PROFILE_ID
**Description:** Foreign key: Softswitch Trunk Group Profile table. Specifies the Timer Profile ID for the Softswitch Trunk Group Profile.

- **VARCHAR(16):** 1-16 ASCII characters.
- **Valid for Command:** add, change, show, audit, sync
- **Possible Value:** [1_16]
- **Parser:** TextParser

### SIPT_ISUP_BASE
**Description:** Not configurable. Mandatory if use-sipt-isup-base=Y. The SIP-T ISUP base version. This field is populated from the SIPT ISUP Version Base table.

- **VARCHAR(32):** 1-32 ASCII characters
- **Valid for Command:** show, audit, sync
- **Possible Value:** [1_32]
- **Parser:** TextParser
### SIPT_ISUP_VER
- **Description:** Mandatory if protocol-type=SIP-T. Defines the SIP-T or SIP-GTD version. Used only if protocol-type=SIP-T. Defined in the SIPT ISUP Version Base table. This token is only used when the protocol-type=SIPT-T. Only the GR317 version of SIP-T is supported. If the value defined in the SIPT ISUP Version Base table has a base value of sip-gtd, then the version is a SIP-GTD type. Otherwise, the version is a SIP-T type.
- **VARCHAR(32):** 1-32 ASCII characters. Permitted value is: GR317.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [1_32]
- **Parser:** TextNoCaseParser

### START_ROW
- **Description:** Specifies to begin displaying data on the screen at a specific row.
- **INTEGER:** 1-100000000 (Default = 1).
- **Valid for Command:** show
- **Default Value:** 1
- **Possible Value:** [1_100000000]
- **Parser:** DecimalParser

### TARGET
- **Description:** Specifies the network element to receive the request.
- **VARCHAR(5):** 1-5 ASCII characters. Permitted values are:
  - CA—Network identifier of a Call Agent.
  - FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.
  - FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.
- **Valid for Command:** sync
- **Mandatory:** sync
- **Possible Value:** [1_10]
- **Parser:** TextParser

### TRUNK_SUB_GRP_TYPE
- **Valid for Command:** add, change, audit, sync, show
- **Default Value:** NONE
- **Possible Value:** NONE, BGID, TGID
- **Parser:** TextParser
SIP-INBOUND-POLICY-PROFILE Table

The SIP-INBOUND-POLICY-PROFILE table has two new POLICY-TYPE values: CONTACT-TGRP and CONTACT-TRUNK-CONTEXT. The Action field is also split into two different files MISSING-ACTION and NOMATCH-ACTION.
SIP Inbound Policy Profile

The SIP Inbound Policy Profile (sip-inbound-policy-profile) table determines the inbound trunk group based on various SIP headers and parameters.

Table Name: SIP_INBOUND_POLICY_PROFILE
Table Containment Area: EMS, CA

Command Types
add, audit, change, delete, help, show, sync

Caution
The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples
show sip-inbound-policy-profile;
add sip-inbound-policy-profile id=via-address;policy-type=VIA-TSAP-ADDR;
show sip-inbound-policy-profile;
change sip-inbound-policy-profile id=via-address;nomatch-action=REJECT;
delete sip-inbound-policy-profile id=via-address;

Usage Guidelines
Primary Key Token(s): ID
Foreign Key Token(s): policy-default-id, tgn-id.
Add Rules: FK constraints.
Change Rules: FK constraints.

Syntax Description
AUTO_REFRESH
Description: Specifies whether to display cached data on the screen.
CHAR(1): Y/N (Default = Y).
Y—Queries the database for the most current data.
N—Queries the database for the most current data only if the cached data is unavailable.
Valid for Command: show
Default Value: Y
Possible Value: Y, N
Parser: BooleanParser

DEFAULT_POLICY_ID
Description: Mandatory if action=use-default-policy. Foreign key: SIP Policy table. Specifies using the default policy ID as the next policy if the record is not found in the sip-inbound-policy table.
VARCHAR(16): 1 - 16 ASCII characters.
Valid for Command: add, change, show, audit, sync
Possible Value: [1_16]
Parser: TextParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Command</th>
<th>Possible Value</th>
<th>Default Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESCRIPTION</td>
<td>Description: Described by the service provider. VARCHAR(64): 1-64 ASCII characters. Valid for Command: add, change, show Possible Value: [1_64]</td>
<td>TextParser</td>
<td>add, change, show</td>
<td>[1_64]</td>
<td></td>
<td>TextParser</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Description: Specifies what token information to display on the screen. VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma. Valid for Command: show Possible Value: [1_1024]</td>
<td>TextParser</td>
<td>show</td>
<td>[1_1024]</td>
<td></td>
<td>TextParser</td>
</tr>
<tr>
<td>LIMIT</td>
<td>Description: Specifies the number of rows to display on the screen. INTEGER: 1-100000000 (Default = 100000000). Valid for Command: show Default Value: 100000000 Possible Value: [1_100000000]</td>
<td>DecimalParser</td>
<td>show</td>
<td>100000000</td>
<td></td>
<td>DecimalParser</td>
</tr>
<tr>
<td>MISSING_ACTION</td>
<td>Valid for Command: add, change, audit, sync, show Default Value: NONE Possible Value: REJECT, USE_DEFAULT_POLICY, USE_TRUNK_GRP, NONE</td>
<td>TextNoCaseParser</td>
<td>add, change, audit, sync, show</td>
<td>NONE</td>
<td></td>
<td>TextNoCaseParser</td>
</tr>
<tr>
<td>NOMATCH_ACTION</td>
<td>Valid for Command: add, change, audit, sync, show Default Value: NONE Possible Value: REJECT, USE_DEFAULT_POLICY, USE_TRUNK_GRP, NONE</td>
<td>TextNoCaseParser</td>
<td>add, change, audit, sync, show</td>
<td>NONE</td>
<td></td>
<td>TextNoCaseParser</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
<td>Data Type</td>
<td>Permitted Values</td>
<td>Command(s)</td>
<td>Mandatory</td>
<td>Possible Value</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>ORDER</td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
<td>VARCHAR(51200)</td>
<td>1-51200 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma. Valid for Command: show Possible Value: [1_1024] Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLICY_TYPE</td>
<td>The SIP Inbound Policy type.</td>
<td>VARCHAR(32)</td>
<td>1-32 ASCII characters. Permitted values are: REQ-URI-HOSTNAME—Use REQURI to identify the next policy or Trunk Group. TGID—Use TGID parameter in the ReqURI to identify the next policy or Trunk Group. PAID-HOSTNAME—Use PAID header hostname part to identify the trunk group. ROUTE-HEADER-HOSTNAME—Use Hostname of the ROUTE-HEADER to determine the inbound Trunk Group. ROUTE-HEADER-USER—Use USER part of the route header to determine the inbound Trunk Group. VIA-TSAP-ADDR—Use VIA TSAP Address to determine the inbound Trunk Group. Valid for Command: add, change, audit, sync, show Mandatory: add Possible Value: REQ_URI_HOSTNAME, TGID, PAID_HOSTNAME, ROUTE_HEADER_HOSTNAME, ROUTE_HEADER_USER, VIA_TSAP_ADDR, CONTACT_TGRP, CONTACT_TRUNK_CONTEXT Parser: TextNoCaseParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_ROW</td>
<td>Specifies to begin displaying data on the screen at a specific row.</td>
<td>INTEGER</td>
<td>1-100000000 (Default = 1). Valid for Command: show Default Value: 1 Possible Value: [1_100000000] Parser: DecimalParser</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
On-Net Routing and LNP for Inter-CMS Routing

On-Net Routing and LNP for Inter-CMS routing provides the following capabilities:

- **ANSI LNP Query Support for Carrier Calls**—Conditionally allow LNP queries on carrier calls, as determined by the Carrier LNP-QUERY flag.

- **LNP Query for On-net Routing, Inter CMS Routing**—Provide control of LNP queries based on the dialed digit-string prefix and Destination. The operator is given flexibility to allow or deny LNP queries for different calls and routing scenarios. For example, queries should be unconditionally blocked for some CMS originations, and for some MGC cases queries should be performed. When a BTS 10200 is acting as both CMS and MGC, the query should be prevented on the subscriber origination towards the NRS, but performed when a call terminates to the MGC on a SIP or PSTN trunk. For traditional BTS 10200 on-net routing scenarios, a query might be desired on subscriber originations to DNs potentially on the same switch (SUB-ONLY), or on other on-net switches (ALL-CALLS).

- **On-net Route Bypass of Carrier Route**—For interlata or toll calls, allow an "on-net route", as defined in the Destination table, to override the carrier routing. "On-net" refers to facilities owned by an operator which includes one or more BTS 10200es (or other switches). SUB-ONLY allows carrier bypass to route the call to a local subscriber on the same BTS 10200. ALL-CALLS allows carrier bypass for all calls which have a valid on-net route. LNP query results are taken into account in the routing decision.

- **Remove LNP Query result data when Carrier LNP-QUERY= N**—For an outgoing carrier call with Carrier LNP-QUERY = N, remove the LNP query result data, if present. The LRN, FCI, and GAP are destroyed as if a query were not performed.

- **Ignore Inbound LNP information**—For an incoming trunk call with LNP data including forward call indicators, etc. When forward call indicators (FCI) bit-M indication "number translated" and Location Routing Number (LRN) and Generic Address Parameter (GAP) are included, the LNP data is ignored, resulting in call delivery based on the called DN (from the GAP).

---

### TG

- **Description:** Unique key. ASCII name for the trunk group.
- **VARnARCH(20):** 1-20 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [1_20]
- **Parser:** TextParser

### TGN_ID

- **Description:** Mandatory if action=use-trunk-group. Foreign key: Trunk Group table. Trunk Group id. Use the specified trunk group as if the call originated over a trunk.
- **INTEGER:** 1-99,999,999
- **Valid for Command:** add, change, show, audit, sync
- **Possible Value:** [1_99999999]
- **Parser:** DecimalParser
On-Net Routing

Figure 2-13 shows On-net Routing in a multi-BTS 10200 environment for ALL-CALLS. The goal for the operator is to route all calls which will eventually terminate within the operator's network totally within the network. That is, carrier routing is bypassed in favor of the on-net route. So, the Destination BYPASS-CARRIER-ROUTING is set to ALL-CALLS. In this scenario, LNP queries are performed on the originating switch (if ported office code and other criteria indicate a query should be performed). Therefore, the destination NANP-LNP-QUERY value PERFORM-LNP-QUERY is used.

Figure 2-13 On-net Routing ALL-CALLS Scenarios

On-net Routing in Multi-BTS Environment: ALL-CALLS A calls B*

1. Destination: call-type INTERLATA (PIC1) or TOLL (PIC2)
   BYPASS-CARRIER-ROUTING is ALL-CALLS
   NANP-LNP-QUERY is PERFORM-LNP-QUERY

   Do LNP query. After translation of SCP result:
   ① LRN is off-net (ported-out of BTS-1): route via Carrier
   ② Otherwise, LRN-x has on-net route to BTS-2, route via destination route to DN B2
   ③ Otherwise, LRN-y does not have on-net route to BTS-2 or no LRN (route-type Not SUB), route via Carrier to DN B3
   ④ Otherwise, no LRN (route-type SUB), or my LRN (ported-in), route to local sub DN B4

Figure 2-14 shows On-net Routing in a Multi-BTS 10200 environment for calls which terminate in the same BTS 10200 that originated the call, for which no LNP query is needed. That is, the operator can avoid carrier routing for calls that terminate on the same switch. For this scenario, the operator is willing to make a trade-off for DNs during the porting transition. That is, in order to avoid extra LNP queries, any DN in the porting transition phase (marked Dn2subscriber status ASSIGNED and LNP-TRIGGER = Y) is routed to the carrier. The carrier performs the LNP query, and if necessary, routes the call back. The trade-off is fewer LNP queries versus unnecessary carrier routing in some cases.
Figure 2-14  On-net Routing SUB-ONLY (Not Ported Subs Only) Scenarios

On-net Routing:  SUB-ONLY (not ported subs only)  A calls B*

1. If dn2subscriber not found in BTS-1, route to Carrier
   A. DN B1a Off-net, or
   B. DN B1b On-net, but in other BTS
2. Otherwise, if dn2subscriber ported-out
   route to Carrier (carrier will do query)
3. Otherwise, if dn2subscriber Inp-trigger=Y (transition DN),
   A. DN B3a is not ported from or is ported-in to BTS-1
      carrier will route back with no LRN or my LRN
   B. DN B3b currently owned/ported-in to other switch
4. Otherwise, use on-net-routing (route to local Sub)
   DN B4 in BTS-1

Destination: call-type INTERLATA (PIC1) or TOLL (PIC2)
BYPASS-CARRIER-ROUTING is SUB-ONLY
NANP-LNP-QUERY is NO_LNP-QUERY

Figure 2-15 shows On-net Routing in a multi-BTS 10200 environment for calls which terminate in the same BTS 10200 that originated the call, for which the originating BTS 10200 does an LNP query for transition DN. The operator can avoid carrier routing for calls that terminate on the same switch. In this case, the operator is willing to accept additional LNP queries to be sure to avoid carrier routing for all cases of local subscribers. For any carrier call to the DN which is in the porting transition on this switch (Dn2subscriber status ASSIGNED and LNP-TRIGGER = Y), an LNP query is done. This is determined by the Destination NANP-LNP-QUERY UNCONDITIONAL-LNP-TRIGGER-QUERY value. After the query, the call is routed to the local subscriber, or to the carrier, depending on the query result.
Figure 2-15  On-net Routing SUB-ONLY (BTS 10200 Queries for Transition Subs) Scenarios

On-net Routing: SUB-ONLY (BTS queries for transition subs)  A calls B*

Destination: call-type INTERLATA (PIC1) or TOLL (PIC2), BYPASS-CARRIER-ROUTING is SUB-ONLY, NANP-LNP-QUERY is UNCONDITIONAL-LNP-TRIGGER-QUERY

1. If dn2subscriber not found in BTS-1, route to Carrier
   A. DN B1a Off-net, or B. DN B1b On-net, but in other BTS

2. Otherwise, if dn2subscriber ported-out route to Carrier (carrier will do query)

3. Otherwise, if dn2subscriber lnp-trigger=Y (transition DN), BTS does query:
   A. My LRN or no LRN: route on-net to DN B3a
   B. Other LRN: DN B3b route to Carrier

4. Otherwise, use on-net-routing (route to local Sub) DN B4 in BTS-1

The above illustrations and descriptions give an overview of some of the LNP query and routing scenarios. For a detailed itemization of the various use cases, please see Table 2-6 on page 2-76.

Inter-CMS Routing

Descriptions of all the possible configurations for inter-CMS routing are not included here. In principle, the scenarios shown in the “On-Net Routing” section on page 2-63 can be applied to an individual CMS or MGC in an inter-CMS configuration. An overview is provided below.

Figure 2-16 illustrates an inter-CMS configuration with an NRS and separated CMS and MGC. CMS refers to a PacketCable Cable Management Server, which serves cable subscribers. The MGC refers to the Media Gateway Controller, which in PacketCable terminology refers to the node that interfaces with the PSTN. An MGC can also serve as the PSTN interface for SIP endpoints behind an NRS and Service Engine (SE), and Edge Proxy (EP).

The originating CMS, e.g., CMS-1, routes the call to the NRS without an LNP query. So subscriber dial plans on CMS-1 will have Destinations for which NANP-LNP-QUERY is NO-LNP-QUERY. The NRS can then route the call to either the MGC or CMS-2. MGC and CMS-2 incoming trunk dial plans might have destinations which allow LNP queries. So these destinations may have NANP-LNP-QUERY values of NA or PERFORM-LNP-QUERY.
Figure 2-16  Inter-CMS Routing: Separated CMS/MGC

Inter-CMS Routing with NRS: Separated CMS/MGC

Figure 2-17 illustrates an inter-CMS configuration with an NRS and a single BTS 10200 acting as both a CMS and MGC. In principle, there is nothing different from the instance above where the CMS and MGC are separated. But this configuration drove the requirement to be able to control LNP queries by the NANP-LNP-QUERY field based on subscriber dial plan separately from trunk dial plans on a per destination basis.

Figure 2-17  Inter-CMS Routing: CMS and MGC on Same BTS 10200

Inter-CMS Routing with NRS: CMS and MGC on same BTS 10200

Table 2-5 shows destination NANP-LNP-QUERY and BYPASS-CARRIER-ROUTING settings for the various configurations.
ANSI LNP Query Support for Carrier Calls

LNP queries are now to be conditionally allowed on interlata and intralata (toll) carrier calls. When carrier routing applies (for either casual dialing, or presubscribed Preferred Interexchange Carrier (PIC), Carrier LNP-QUERY = Y/N is used to indicate whether an LNP query is allowed. This capability exists for ITU LNP, and is added for ANSI/North America.

LNP query capability is supported for interlata (PIC1) and toll (PIC2) calls; however, queries are not supported in international (call-type INTL, PIC3) calls, because number portability is not supported for international calls.

For an interlata/toll or casual carrier call, there is an interaction of the carrier LNP-QUERY flag and the NANP-LNP-QUERY flag:

- Carrier LNP-QUERY is applicable only when Carrier USE-DIAL-PLAN=N
- Carrier LNP-QUERY is applicable only when Destination NANP-LNP-QUERY = NA. When NANP-LNP-QUERY = NA:
  - If Carrier LNP-QUERY = N, then there is no query.
  - If Carrier LNP-QUERY = Y and NANP-LNP-QUERY value NA, then there may be a query depending on Ported Office Code and other criteria. For example, if a Ported Office Match is not found, or Dn2subscriber data criteria do not allow a query, then there is no query.
  - If BOTH Carrier LNP-QUERY = Y, and NANP-LNP-QUERY criteria allow a query, then there is a query.

Within the LNP query criteria decision checks, carrier routing is detected by any of the following conditions:

- Presence of a Carrier Identification Code (CIC), for example as a result of casual dialing, or from ISUP Transit Network Selection (TNS) parameter.
- Call-type TOLL, appropriate Nature of Dial (NOD) value and Origination with valid subscriber data
- PIC2 Call-type INTERLATA, appropriate Nature of Dial (NOD) value and origination with valid subscriber data PIC1

After satisfying any of the above checks for a valid carrier, if the carrier database record has USE-DIAL-PLAN = Y, then by default the route from the destination is used, rather than routing specified in the carrier record. USE-DIAL-PLAN = Y implies that the BTS 10200 operator is itself the acting carrier for the call.

So, for carrier USE-DIAL-PLAN = Y, the normal LNP query decision criteria are used. For example, according to the preexisting LNP criteria logic, queries are still not allowed on a carrier call when any of the following apply:

- Operator (carrier) call
- When a ported-office-code match is not found
- When a dn2subscriber record is not found and the destination route-type is SUB
- When dn2subscriber status is not PORTED-OUT and LNP-TRIGGER=N
Otherwise, when Carrier LNP-QUERY = Y and USE-DIAL-PLAN=N, existing LNP query criteria allow queries on carrier calls when a ported-office-code match is found, and any of the following are true:

- Called DN does not appear in the office-code table.
- dn2subscriber entry for the DN is not found and either:
  - Destination entry is not found.
  - Or, Destination ROUTE-TYPE is not SUB.
- Dn2subscriber entry has status PORTED-OUT, or LNP-TRIGGER = Y

LNP Query for On-net Routing, Inter CMS Routing

LNP and ported-in and ported-out subscribers must be taken into account for BTS 10200 On-net Routing, inter-CMS Routing. This requirement provides precise control of LNP queries based on the dialed digit-string prefix and destination. The operator is given flexibility to allow or deny LNP queries for different calls and routing scenarios.

A new Destination schema field, NANP-LNP-QUERY is added with values:

- **NA**: support preexisting BTS 10200 LNP query capability (Release 4.5), with two additions:
  - Conditionally allow LNP queries on Carrier calls, in conjunction with the Carrier LNP-QUERY field
  - Queries are now allowed on World Zone 1 calls (to Canada, Hawaii, Alaska, etc), that is, when call-type is INTL-WZ1

- **NO-LNP-QUERY**: unconditionally prevents an LNP query on any call reaching this Destination. This is useful for Inter CMS Routing, or for any case where the originating CMS subscriber dial-plan prevents queries (because the query is performed by the NRS, MGC, terminating CMS, or Carrier).

- **PERFORM-LNP-QUERY**: Similar to NA value, except that the Carrier LNP-QUERY field is ignored, and a query can be allowed on any call-type. Prior to Release 5.0 the BTS 10200 allowed queries only for call-type LOCAL, INTERLATA, or TOLL. This value can be used in an on-net routing or inter-CMS scenario where a given CMS/MGC should perform LNP queries, especially prior to on-net routing.

- **UNCONDITIONAL-LNP-TRIGGER-QUERY**: Conditionally allows an LNP query for DNs during the porting in or out transition (Dn2subscriber LNP-TRIGGER=Y). This value is useful for an on-net routing scenario where carrier bypass is allowed for DNs assigned on the originating BTS 10200 (BYPASS-CARRIER-ROUTING SUB-ONLY). This value will allow a query regardless of the calltype.

Table 2-5 shows routing scenarios and suggested provisioning values.
Table 2-5  Routing Scenarios and Suggested Provisioning

<table>
<thead>
<tr>
<th>Scenario</th>
<th>BYPASS-CARRIER-ROUTING</th>
<th>NANP-LNP-QUERY</th>
<th>Carrier LNP-QUERY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal like Release 4.5.</td>
<td>NONE</td>
<td>—</td>
<td>N</td>
</tr>
<tr>
<td>Like Release 4.5, but queries are also to be allowed depending on the Carrier LNP-QUERY value.</td>
<td>NONE</td>
<td>—</td>
<td>Y</td>
</tr>
<tr>
<td>Carrier bypass (on-net route) only for local calls terminating on this switch which don't need an LNP query.</td>
<td>SUB-ONLY</td>
<td>NO-LNP-QUERY, but routing logic must route to carrier for PORTED-OUT and LNP-TRIGGER=Y cases</td>
<td>—</td>
</tr>
<tr>
<td>Carrier bypass (on-net route) only for local calls terminating on this switch with queries allowed for DNs during porting transition.</td>
<td>SUB-ONLY</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>—</td>
</tr>
<tr>
<td>Multi-BTS 10200—Carrier bypass (on-net route) to all on-net switches.</td>
<td>ALL-CALLS</td>
<td>PERFORM-LNP-QUERY</td>
<td>—</td>
</tr>
<tr>
<td>Inter-CMS no NRS.</td>
<td>ALL-CALLS</td>
<td>PERFORM-LNP-QUERY</td>
<td>—</td>
</tr>
<tr>
<td>Inter-CMS with NRS.</td>
<td>SUB-ONLY</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>—</td>
</tr>
</tbody>
</table>

For more examples of provisioning combinations, and LNP query results and routing results, see Table 2-6.

Carrier Calls

See the “On-net Route Bypass of Carrier Route” section on page 2-72 and Destination NANP-LNP-QUERY value NA below.

Destination NANP-LNP-QUERY value NA:

This value is similar to previous Release 4.5 LNP query criteria, except that a query can be allowed for carrier calls. For value NA, there will be an LNP query if the following conditions are satisfied:

- An LNP query has not been done already by this BTS 10200 or another switch on the call.
- “Nature of Dial” (derived from nature of address), is one of the following:
  - 7-digit National, 10-digit National, 7-digit Local, 10-digit National, Casual-7-digit National, Casual 10-digit National, Casual 7-digit Local, Casual 10-digit Local, Network Specific 1, Network Specific 2, Network Specific 3, Network Specific 4, Network Specific 5, Network Specific 6, or Network Specific 7.
- Destination call-type:
  - Value is either LOCAL, INTERLATA, TOLL, TOLL-FREE, or INTL-WZ1
  - Or, for a different call-type value, a matching entry is found in the Call Type Profile with LNP-QUERY = Y.
• If Carrier Identification Code (CIC) is present, and one of the following is true:
  - Carrier USE-DIAL-PLAN=Y, or Carrier LNP-QUERY=Y
  - Or, call-type TOLL,
    - The subscriber’s Pop supports intraLATA toll pre-subscription (ITP=Y), and either PIC2 Carrier USE-DIAL-PLAN=Y or Carrier LNP-QUERY=Y,
    - Or, if the subscriber’s Pop does not support intraLATA toll pre-subscription (ITP=N), then the Destination has route-type CARRIER, then if Carrier USE-DIAL-PLAN=Y, or Carrier LNP-QUERY=Y
  - Or call-type Interlata
If PIC1 Carrier USE-DIAL-PLAN=Y, or Carrier LNP-QUERY=Y.
• Ported Office Code match found on either 10, 9, 8, 7, 6, or 3 digit prefix (longest match), and either:
  - Office Code match not found
  - Or Dn2subscriber record found and status is PORTED-OUT, or LNP-TRIGGER=Y
  - Or Dn2subscriber record not found, and either
    - Destination not found (this case might not actually be possible).
    - Or Destination route-type is not SUB.

**Destination NANP-LNP-QUERY Value NO-LNP-QUERY**

When digit translation results in reaching a Destination with value NO-LNP-QUERY, then there is no LNP query in any case.

**Destination NANP-LNP-QUERY Value PERFORM-LNP-QUERY**

This value is works exactly the same as value NA, except for these exceptions:
• PERFORM-LNP-QUERY allows a query on any call-type (rather than just for call-types LOCAL, INTERLATA, TOLL, and TOLL-FREE as for NA). The Call Type Profile is not checked.
• For carrier calls, PERFORM-LNP-QUERY allows a query without checking the Carrier LNP-QUERY value. So, even if LNP-QUERY=N, a query can be performed.

**Destination NANP-LNP-QUERY Value UNCONDITIONAL-LNP-TRIGGER-QUERY**

For value UNCONDITIONAL-LNP-TRIGGER-QUERY, there WILL be an LNP query if the following conditions are satisfied:
• An LNP query has not been done already by this BTS 10200 or another switch on the call.
• "Nature of Dial" (derived from nature of address), is one of the following:
  - 7-digit National, 10-digit National, 7-digit Local, 10-digit National, Casual-7-digit National, Casual 10-digit National, Casual 7-digit Local, Casual 10-digit Local, Network Specific 1, Network Specific 2, Network Specific 3, Network Specific 4, Network Specific 5, Network Specific 6, Network Specific 7
• Dn2subscriber record is found, and status is ASSIGNED, and LNP-TRIGGER=Y.
Retranslation After an LNP Query

After an LNP query, there might be a new translation based on the SCP result. Routing scenarios after an LNP query result are as follows:

- SCP returns no LRN: in this case, the original translation applies, and the call is routed appropriately.
- SCP returns an LRN:
  - LRN is off-net: the call is routed to the appropriate switch, using the routing specified by the new Destination reached through translation, and if applicable, the Carrier.
  - LRN is "my LRN" and carrier routing not applicable: The LRN is considered to be "my LRN" if either the LRN digits have a Dn2subscriber record with status = LRN, or the calling party’s Pop contains MY-LRN digits which match the LRN from the SCP. In either case, the original called party digits (from GAP parameter received from the AIN Feature Server) are used to find the dn2subscriber entry, and the call is routed to the subscriber. This is also the case when the Destination has route-type not SUB; the Destination routing is overridden and the call is offered to the subscriber on the BTS 10200.
  - For a carrier call for which there is an on-net route and the LRN is on-net:
    - "My LRN" and the Dn2subscriber record exist with status ASSIGNED (LNP-TRIGGER=Y): route to the local subscriber, and ignore (bypass) carrier routing, and ignore the routing specified in the original Destination.
    - On-net LRN of another on-net switch: bypass carrier routing, and use the on-net route specified in the destination.

Call-type After Multiple Digit Translations

Normally after a digit translation, the call-type is retrieved from the resulting destination. It is possible that further digit translations will occur, for example, the retranslation on the LRN after an LNP query. Normally the call-type from the original translation is used after subsequent translations. So the call-type in the destination resulting from the LRN translation is ignored, in favor of the original call-type resulting from the original called DN translation.

An exception is that the call-type can change from a translation for policy-nxx. For example, dialed digits 611 translate to a destination with call-type REPAIR, which has a route-guide containing policy-type=NXX, with a policy-nxx containing a new "translated-dn". In this case, a new translation on the translated-dn occurs, and the new destination call-type is used subsequently during the call. This is necessary to prevent problems related to a possible NXX (800 toll-free) translation.

On-net routing is not supported for ITU LNP.

Removal of Ported Office Code IN-CALL-AGENT Field

As part of this feature, all checking of the Ported Office Code IN-CALL-AGENT flag is removed. Essentially within all logic for which there is a Ported Office Code match, the logic functions as if the IN-CALL-AGENT = Y.
Non-carrier call Routing to Ported-in DNs

Prior to Release 5.0, implicit routing was allowed for calls to ported-in subscribers. The DN of a ported-in subscriber is owned by another switch, so the dial-plan for the DN prefix goes to a destination which has a route to the donor switch (owning the DN block). During the BTS 10200 routing and translation, prior to routing using the destination route to the donor switch, if it is determined that the DN is for an assigned subscriber in the BTS 10200, and the DN or prefix has a Ported Office Code match, then the destination route is ignored, and the call is routed directly to the local subscriber.

In Release 5.0, the above routing logic is still applicable for destination NANP-LNP-QUERY values NA, PERFORM-LNP-QUERY, and UNCONDITIONAL-LNP-TRIGGER-QUERY.

However, destination NANP-LNP-QUERY value NO-LNP-QUERY has been added to block queries for network configurations where it is desirable for all CMS originations to route to an NRS. For such a configuration, the operator might want the explicit route from the dial plan and destination to be honored, even for ported-in subscribers. With this in mind, specifically for cases where the destination specifies NO-LNP-QUERY and the route-type is not SUB, the call is routed via the destination. This is the case for calls which do not have call-type INTERLATA or TOLL; for Interlata and Toll carrier calls, the Destination BYPASS-CARRIER-ROUTING field determines whether carrier routing (value NONE) or routing to the local subscriber is desired (values SUB-ONLY or ALL-CALLS).

On-net Route Bypass of Carrier Route

Provide the capability to selectively override, or bypass, carrier routing if an "on-net route" exists to a subscriber on the same switch, or on another "on-net" switch within the same operator's network.

Specifically, for InterLATA and IntraLATA calls, that is, calls with destination call-type of INTERLATA or TOLL, carrier routing is normally bypassed in favor of the destination routing when:

- Destination BYPASS-CARRIER-ROUTING is ALL-CALLS, or
- Destination BYPASS-CARRIER-ROUTING is SUB-ONLY and a dn2subscriber record exists.

In addition to carrier bypass for the above scenarios, under certain conditions, carrier routing is allowed instead of routing to a local subscriber. For example, even if the subscriber appears to be ported-in to the CMS (Destination BYPASS-CARRIER-ROUTING=NONE and ROUTE-TYPE not SUB, dn2subscriber status ASSIGNED and LNP-TRIGGER=Y, and the query result contains "my LRN" of the same BTS 10200), carrier routing is used instead of routing directly to the local subscriber.

The operator owning the BTS 10200 may itself be a carrier, as defined by a carrier route with Carrier USE-DIAL-PLAN = Y. Essentially this is the same as On-net Routing, as the dial plan and destination routing are used for the call. Checks for On-net Routing carrier bypass only apply for carriers which do not use the dial plan routing (USE-DIAL-PLAN = N).

On-net routing does not apply to operator calls, and is also not supported for casual carrier calls.

Some sample values of the new Destination BYPASS-CARRIER-ROUTING field are shown in Table 2-5.
Carrier Bypass in favor of an On-net Route applies under the following conditions:

- A PIC1 or PIC2 Carrier Identification Code (CIC) is present.
- Destination call-type is INTERLATA or TOLL.
- It is not an operator call.
- Carrier USE-DIAL-PLAN = N (see description of this below).
- Destination route-type is Not CARRIER.
- It is not a casual carrier call (based on Nature of Dial, NOD).
- Dn2subscriber record for the DN does not exist, and the Destination BYPASS-CARRIER-ROUTING is ALL-CALLS.
- Dn2subscriber record exists, BYPASS-CARRIER-ROUTING is SUB-ONLY or ALL-CALLS, and any of the following are true:
  - Dn2subscriber status is PORTED-OUT and an LNP query was done. This condition implies that the SCP either returned no LRN, or "my LRN" (LRN matching either Dn2subscriber record with status LRN, or Pop MY-LRN). This is an error case, because our switch has marked the subscriber as PORTED-OUT, but the SCP has returned my LRN. There is no chance to complete this call, so we bypass carrier and route on-net, and the call fails. During the porting transition, our BTS 10200 has probably already marked the DN as ported-out, but the SCP has not updated the database with the correct LRN of the recipient switch.
  - Dn2subscriber status ASSIGNED, and LNP-TRIGGER = N: this is the normal case for carrier bypass to an on-net subscriber of this switch, for which LNP porting has not occurred.
  - Dn2subscriber status ASSIGNED, LNP-TRIGGER = Y, LNP query was done, and route-type is SUB (donor transition case): We bypass carrier and route on-net, because our subscriber is in transition to being ported-out, but the SCP does not yet have the LRN of the recipient switch.
  - Dn2subscriber status ASSIGNED, LNP-TRIGGER = Y, LNP query was done, and route-type is Not SUB, and the SCP returned my LRN (recipient transition case): We bypass carrier and route on-net, because this DN is in transition to being ported-in to this switch, and the SCP has provided our LRN, indicating that the porting-in transition is complete.

- Dn2subscriber status not PORTED-OUT and not ASSIGNED, LNP query was done, and route-type is SUB: There is no chance to route this call. Because route-type is SUB, we know the DN’s DN block (e.g., NPA-NXX) is owned by this switch. Perhaps somebody has dialed a disconnected or vacant number, or accidentally dialed LRN. In any case, we bypass the carrier and route locally for the call to fail.

If the SCP query results in no LRN provided, then we must assume that the porting-in transition has not completed, so we do not bypass carrier, because carrier routing is required to route the call to the switch owning the DN block range of the called DN.
Routing Types

Chapter 2  Routing

In a few cases, we do not bypass carrier routing because a necessary LNP query was not done, or for other reasons we may not be able to correctly route the call. For example:

- Dn2subscriber record exists, BYPASS-CARRIER-ROUTING is SUB-ONLY or ALL-CALLS, Dn2subscriber status is PORTED-OUT, and an LNP query was NOT done. For status PORTED-OUT, an LNP query is needed to route the call. Probably there is a provisioning discrepancy, for example, in a switch with a ported-out DN, a destination which specifies BYPASS-CARRIER-ROUTING of either SUB-ONLY or ALL-CALLS should have the NANP-LNP-QUERY set to NA or PERFORM-LNP-QUERY. Also, the Ported Office Code might be missing. In any case, the carrier bypass without an LNP query prevents the call from completing to the DN on the recipient switch, so the call is routed to the carrier, who is expected to do the query and complete the call to the recipient switch.

- Dn2subscriber record exists, BYPASS-CARRIER-ROUTING is SUB-ONLY or ALL-CALLS, Dn2subscriber status is ASSIGNED, LNP-TRIGGER = Y, and an LNP query was not done. For status ASSIGNED with LNP-TRIGGER = Y, an LNP query is expected in order to determine whether the DN during the porting transition is still on our switch or not. Probably there is a provisioning discrepancy, for example, in a switch with a DN in porting transition, a Destination which specifies BYPASS-CARRIER-ROUTING of either SUB-ONLY or ALL-CALLS should have the NANP-LNP-QUERY set to NA, PERFORM-LNP-QUERY, or UNCONDITIONAL-LNP-TRIGGER-QUERY. Also, the Ported Office Code might be missing. In any case, the carrier bypass without an LNP query routes the call to the subscriber on this switch, which may be incorrect. So carrier bypass is not allowed, and we let the carrier take care of routing the call properly.

- Dn2subscriber record exists, BYPASS-CARRIER-ROUTING is SUB-ONLY or ALL-CALLS, Dn2subscriber status is Not ASSIGNED, LNP-TRIGGER = N, route-type is Not SUB. This is an unusual case, because we have a dn2subscriber record, but the Destination route-type is Not SUB. Possibly a DN ported-in to this switch, but maybe has since been marked as Vacant, Disconnected, etc. Since we don't own the NPA-NXX DN block (implied by route-type not SUB), we allow carrier routing to route the call to the number block owner.

Remove LNP Query Result Data When Carrier LNP-QUERY = N

For an outgoing carrier call after an LNP query in the same switch, with Carrier LNP-QUERY = N, remove the LNP query result data, if present. The LRN, FCI, and GAP are destroyed as if a query were not performed. That is, outgoing IAM Forward Call Indicators (FCI) bit-M is set to "not translated", and if Generic Address Parameter (GAP) is present, then the Called Party Number (CdPN) digits are set to the (ported) called DN from the Generic Address Parameter (GAP), the GAP parameter is destroyed.

Existing BTS 10200 operators might have agreements with their carriers that the carrier does the LNP query. Prior to this feature, the BTS 10200 did not allow an LNP query on carrier calls. Now, as a result of this feature, LNP queries might be required in order to determine whether an on-net route exists. If a query is needed but then it is determined that the call needs to be routed to the carrier, and the carrier expects to perform queries (Carrier LNP-QUERY=N), the LNP data is removed. This ensures that the carrier's expectation that it can do the query is met, and the carrier is not aware that a query was already done.

The LNP data will be removed only if the LNP query occurred on the same switch. This ensures that valid LNP data as a result of a query that was done by any switch prior to routing to this BTS 10200 will not be removed.
Removing the LNP data affects only the outgoing signaling message (i.e., SS7 ISUP IAM). The LNP data is retained in the BTS 10200, so billing and other functions are not affected by removal of the LNP data from the signaling message. The LNP data is removed if all of the following conditions are met:

- An ANSI LNP query was performed in this switch.
- The outgoing signaling message contains the Transit Network Selection (TNS) parameter, which has a Carrier Identification Code (Carrier ID, or CIC).
- Carrier record (accessed by Carrier ID from the TNS) has LNP-QUERY = N.
- Carrier record has USE-DIAL-PLAN = N.

Note that an alternative method to remove the LNP data is pre-existing. That is, if the outgoing trunk group SIGNAL-PORTED-NUMBER = Y, then the LNP data is removed in the same way as described above.

**Ignore Inbound LNP Information**

When an incoming trunk call is received on a trunk group with IGNORE-INBOUND-LNP = Y, ignore any received LNP data as if it were not received. Specifically, the FCI bit-M is set to "number not translated", and if the GAP and LRN are present, the GAP digits are placed in the Called Party Number digits, and the GAP and LRN are destroyed.

"LNP data" received on an incoming call as the result of an LNP query on another switch might consist of:

- ANSI ISUP forward call indicators (FCI) bit-M set indicating "translated number", and is present if an LNP query was performed.
- LRN and GAP, present if provided by the SCP as a result of an LNP query when the DN is ported; not present if the DN is not ported:
  - The Generic Address Parameter (GAP) may contain the original called party digits (GAP type of address indicates ported dialed number), and
  - The Called Party Number (CdPN) parameter may contain the Location Routing Number (LRN) which addresses the recipient switch.

This requirement adds the capability to ignore this LNP information and process the call as if the called party digits were dialed without an LNP query.

When a call is received on a trunk group and the trunk group IGNORE-INBOUND-LNP = Y, then if the FCI indicates translated number and a GAP is present, then the GAP (original called party) digits are copied into the CdPN digits (destroying the LRN), then the GAP parameter is destroyed, and the FCI is reset to indicate that the number is not translated. Then the call is allowed to proceed.

Note that this requirement has the following side effects on other existing LNP functionality:

1. The billing record does not show the LRN and GAP.
2. If the call fails, LNP-specific measurements and notifications (performs as if the LRN and GAP were not received.)
Warning

Ignore-inbound-lnp = Y should be used with care, and is not recommended for normal routing scenarios. Clearing the FCI could minimally result in extra, unneeded queries, and at worst, result in routing loops during porting transitions. For example, if a DN is ported twice, and different switches/operators use different SCPs, which don't have LRNs exactly synchronized, then each switch will query their SCP and route the call to the other. Such a routing loop ("shoelaces") would continue until one of the hops expires or all available trunks are exhausted. Once the hop count expires or all trunks are seized, then everything immediately clears. Nevertheless, such routing loops are a reason for concern, and the normal FCI checks with Ignore-inbound-lnp = N will prevent them from occurring.

If Ignore-inbound-lnp = Y is used, we recommend that you tailor the appropriate trunk group profile(s) (e.g., ss7-ansi-tg-profile) hop-counter to a reasonable (small) value such that a routing loop, should it occur, does not busy out too many trunk circuits.

On-net Routing Use Case Matrix

Table 2-6 provides a matrix of on-net routing use cases.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NO-LNP-QUERY</td>
<td>N DC1</td>
<td>DC</td>
<td>DC</td>
<td>DC</td>
<td>DC</td>
<td>N</td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>2</td>
<td>NO-LNP-QUERY</td>
<td>N DC</td>
<td>DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>3</td>
<td>NO-LNP-QUERY</td>
<td>N DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>4</td>
<td>NO-LNP-QUERY</td>
<td>N DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Destination routing.</td>
</tr>
<tr>
<td>5</td>
<td>NO-LNP-QUERY</td>
<td>N DC</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Error case.</td>
</tr>
<tr>
<td>6</td>
<td>NO-LNP-QUERY</td>
<td>N DC</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Destination routing.</td>
</tr>
<tr>
<td>7</td>
<td>NO-LNP-QUERY</td>
<td>Y DC (N)</td>
<td>NONE</td>
<td>DC (Y)</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>8</td>
<td>NO-LNP-QUERY</td>
<td>Y DC (Y)</td>
<td>NONE</td>
<td>DC (Y)</td>
<td>DC (N)</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>9</td>
<td>NO-LNP-QUERY</td>
<td>Y DC (Y)</td>
<td>NONE</td>
<td>DC</td>
<td>DC (Y)</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>-------------------------------------------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
<td>------------</td>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td>10</td>
<td>NO-LNP-QUERY</td>
<td>Y (PIC2)</td>
<td>DC (Y)</td>
<td>NONE</td>
<td>DC</td>
<td>DC (Y)</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>11</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>NONE</td>
<td>DC</td>
<td>DC (Y)</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>12</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>13</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Bypass carrier and route on-net to local sub.</td>
</tr>
<tr>
<td>14</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>15</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>16</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>17</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Bypass carrier and route on-net to local sub.</td>
</tr>
<tr>
<td>18</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Bad provisioning.</td>
</tr>
<tr>
<td>19</td>
<td>NO-LNP-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Bypass carrier.</td>
</tr>
<tr>
<td>101</td>
<td>NA</td>
<td>N</td>
<td>DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>Y/N</td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>102</td>
<td>NA</td>
<td>N</td>
<td>DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>Y/N</td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>103</td>
<td>NA</td>
<td>N</td>
<td>DC</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>DC</td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>100</td>
<td>NA</td>
<td>N</td>
<td>DC (N)</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>100a</td>
<td>A^2</td>
<td>Local</td>
<td>DC</td>
<td></td>
<td></td>
<td>My LRN</td>
<td></td>
<td></td>
<td>Same destination after query.</td>
</tr>
<tr>
<td>100b</td>
<td>B^3</td>
<td>Local</td>
<td>DC</td>
<td></td>
<td></td>
<td>On-net LRN</td>
<td></td>
<td></td>
<td>Route on-net via LRN destination.</td>
</tr>
<tr>
<td>100c</td>
<td>C^4</td>
<td>Local</td>
<td>DC</td>
<td></td>
<td></td>
<td>Off-net LRN</td>
<td></td>
<td></td>
<td>Route via LRN destination.</td>
</tr>
</tbody>
</table>
### Table 2-6    On-net Routing Use Case Matrix (continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>NA</td>
<td>Y</td>
<td>NONE</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>105</td>
<td>NA</td>
<td>Y</td>
<td>NONE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Carrier routing after LNP query</td>
</tr>
<tr>
<td>106</td>
<td>NA</td>
<td>Y</td>
<td>NONE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td>Carrier allows LNP QUERY—retranslate on received LRN.</td>
<td></td>
</tr>
<tr>
<td>106a</td>
<td>A</td>
<td>Carrier</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>My LRN</td>
<td>Error case.</td>
</tr>
<tr>
<td>106b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
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<td>After LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>106c</td>
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</tr>
<tr>
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### Table 2-6  On-net Routing Use Case Matrix (continued)

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<td>117</td>
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</tr>
<tr>
<td>118</td>
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<td>On-net route to local sub.</td>
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**Notes:**
- **Y** indicates yes.
- **N** indicates no.
## Table 2-6  On-net Routing Use Case Matrix (continued)

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<td>On-net LRN</td>
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<td>Off-net LRN</td>
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<td>121</td>
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<td>Y</td>
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<td>Y</td>
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<td>Any LRN</td>
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<td>My LRN</td>
</tr>
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<td></td>
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<td>Same destination after query.</td>
</tr>
<tr>
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<td>ALL-CALLS</td>
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<td>On-net LRN</td>
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</tr>
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<td>NONE or SUB-ONLY</td>
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<td>Off-net LRN</td>
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<tr>
<td>122</td>
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<td>N</td>
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</tr>
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<td>124</td>
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<td>Y</td>
<td>No LRN</td>
<td>On-net routing to local sub.</td>
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</tr>
<tr>
<td>130</td>
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<td>Any LRN</td>
<td>Carrier allows LNP QUERY—retranslate on received LRN.</td>
</tr>
<tr>
<td>130a</td>
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<td></td>
<td>My LRN</td>
<td>Same destination after query.</td>
</tr>
<tr>
<td>130b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
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<td>Off-net LRN</td>
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</tr>
<tr>
<td>130c</td>
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<td>Re-translate on received LRN.</td>
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### Table 2-6  On-net Routing Use Case Matrix (continued)

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<td>On-net routing to local sub.</td>
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<td>Carrier allows LNP QUERY—retranslate on received LRN.</td>
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<td>Carrier</td>
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<td>Off-net LRN</td>
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<td>Route on-net (carrier bypass) to local sub.</td>
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### Table 2-6 On-net Routing Use Case Matrix (continued)

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<th>Carrier LNP-QUERY</th>
<th>LNP-TRIGGER or PORTED-OUT</th>
<th>LNP Query?</th>
<th>LNP Query LRN?</th>
<th>Action</th>
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<td>Y</td>
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### Table 2-6  On-net Routing Use Case Matrix (continued)

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<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN—after LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>216</td>
<td>PERFORM-LNP-QUERY</td>
<td>Y DC (Y) ALL-CALLS</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>On-net route (carrier bypass) to local sub.</td>
</tr>
<tr>
<td>217</td>
<td>PERFORM-LNP-QUERY</td>
<td>Y DC (Y) ALL-CALLS</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td>Case 1: If dn2sub does exist, but is not assigned, route to the carrier. Case 2: If dn2sub does not exist, on-net route (carrier bypass), using route from destination.</td>
</tr>
<tr>
<td>218</td>
<td>PERFORM-LNP-QUERY</td>
<td>Y DC (N) ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td>No LRN</td>
</tr>
<tr>
<td>219</td>
<td>PERFORM-LNP-QUERY</td>
<td>PIC1 or PIC2 ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td>Any LRN Retranslate on received LRN.</td>
</tr>
<tr>
<td>219a</td>
<td>A</td>
<td>Carrier</td>
<td>SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Error case.</td>
</tr>
<tr>
<td>219b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On-net LRN After LRN translation, make new routing decision based on new destination.</td>
</tr>
</tbody>
</table>
### Table 2-6 On-net Routing Use Case Matrix (continued)

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>219c C</td>
<td>Carrier</td>
<td>NONE OR SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN Retranslate on LRN—after LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>220 PERFORM-LNP-QUERY</td>
<td>Y</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td></td>
<td></td>
<td>On-net routing to local sub.</td>
</tr>
<tr>
<td>221 PERFORM-LNP-QUERY</td>
<td>Y</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td></td>
<td>LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>221a A</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>My LRN</td>
</tr>
<tr>
<td>221b B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LRN</td>
<td>On-net LRN After LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>221c C</td>
<td>Carrier</td>
<td>NONE OR SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LRN</td>
<td>Off-net LRN Retranslate on LRN.</td>
</tr>
<tr>
<td>301 UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>N</td>
<td>DC</td>
<td>DC</td>
<td>Y</td>
<td>N</td>
<td>Y/N</td>
<td></td>
<td></td>
<td>Normal call routing.</td>
</tr>
<tr>
<td>302 UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>N</td>
<td>DC (Y)</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
<td>Normal call routing.</td>
</tr>
</tbody>
</table>
### Table 2-6 On-net Routing Use Case Matrix (continued)

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<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>303</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>N DC DC</td>
<td>Y N N</td>
<td>Route to local ported-in sub.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>304</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>N DC (N) DC</td>
<td>Y Y Y</td>
<td>No LRN</td>
<td>Normal call routing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>N DC (N) DC (NONE)</td>
<td>Y Y Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305a</td>
<td>A Local DC</td>
<td>My LRN</td>
<td>Route call to local ported-in sub.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305b</td>
<td>B Local DC</td>
<td>On-net LRN</td>
<td>Route via LRN destination.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305c</td>
<td>C Local DC</td>
<td>Off-net LRN</td>
<td>Route via LRN destination.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>306</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y DC (Y) NONE</td>
<td>Y N N</td>
<td>Carrier routing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>307</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y DC (Y) NONE</td>
<td>Y Y Y</td>
<td>No LRN</td>
<td>Carrier routing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>308</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y (Interlata) DC (Y) NONE</td>
<td>Y Y Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>308a</td>
<td>A Carrier NONE</td>
<td>My LRN</td>
<td>Carrier routing.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Use Case No.</td>
<td>NANP-LNP-QUERY</td>
<td>Carrier Call? (Interlata or Toll, usedial-plan=N)</td>
<td>Carrier LNP-QUERY</td>
<td>BYPASS-CARRIER</td>
<td>Ported-Office-Code Match?</td>
<td>LNP-TRIGGER or PORTED-OUT</td>
<td>LNP Query</td>
<td>LRN</td>
<td>Action</td>
</tr>
<tr>
<td>-------------</td>
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<td>-----------------------------------------------</td>
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<td>---------------------------</td>
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<td>-----</td>
<td>--------</td>
</tr>
<tr>
<td>308b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On-net LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>308c</td>
<td>C</td>
<td>Carrier</td>
<td>NONE or SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>309</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>NONE</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>310</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>NONE</td>
<td>DC</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>310a</td>
<td>A</td>
<td>Carrier</td>
<td>NONE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>My LRN</td>
<td>Carrier routing.</td>
</tr>
<tr>
<td>310b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On-net LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>310c</td>
<td>C</td>
<td>Carrier</td>
<td>NONE or SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN translation, make new routing decision based on new destination.</td>
</tr>
</tbody>
</table>
### Table 2-6  On-net Routing Use Case Matrix (continued)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>311</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Terminate call locally (bypass carrier) if my subscriber (status=assigned), else normal carrier routing.</td>
</tr>
<tr>
<td>312</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Normal carrier routing.</td>
</tr>
<tr>
<td>313</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y (Interlata)</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>no LRN</td>
<td>Bypass carrier; route on-net to local not ported (yet) subscriber.</td>
</tr>
<tr>
<td>314</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>any LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>314a</td>
<td>A</td>
<td>Carrier</td>
<td>SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>My LRN</td>
<td>Bypass carrier, and route on-net to not ported local sub.</td>
</tr>
<tr>
<td>314b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On-net LRN</td>
<td>After LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>314c</td>
<td>C</td>
<td>Carrier</td>
<td>NONE or SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN</td>
<td>After LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>-------------</td>
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<td>-------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>315</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Normal carrier routing.</td>
</tr>
<tr>
<td>316</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>SUB-ONLY</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>316a</td>
<td>A Carrier</td>
<td>SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>My LRN</td>
<td>Bypass carrier, and route on-net to ported in local sub.</td>
<td></td>
</tr>
<tr>
<td>316b</td>
<td>B Carrier</td>
<td>ALL-CALLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>On-net LRN</td>
<td>After LRN translation, make new routing decision based on new destination.</td>
<td></td>
</tr>
<tr>
<td>316c</td>
<td>C Carrier</td>
<td>NONE or SUB-ONLY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Off-net LRN</td>
<td>After LRN translation, make new routing decision based on new destination.</td>
<td></td>
</tr>
<tr>
<td>317</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td></td>
<td>Bypass carrier.</td>
</tr>
<tr>
<td>318</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
<td>Bad provisioning.</td>
</tr>
</tbody>
</table>
## Table 2-6  On-net Routing Use Case Matrix (continued)

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</thead>
<tbody>
<tr>
<td>319</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Bypass carrier; route on-net to local not ported (yet) subscriber.</td>
</tr>
<tr>
<td>320</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>No LRN</td>
<td>Bypass carrier; route on-net to switch owning the DN block.</td>
</tr>
<tr>
<td>321</td>
<td>UNCONDITIONAL-LNP-TRIGGER-QUERY</td>
<td>Y</td>
<td>DC (Y/N)</td>
<td>ALL-CALLS</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Any LRN</td>
<td>Retranslate on received LRN.</td>
</tr>
<tr>
<td>321a</td>
<td>A</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td>My LRN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bypass carrier, and route on-net to ported in local sub.</td>
</tr>
<tr>
<td>321b</td>
<td>B</td>
<td>Carrier</td>
<td>ALL-CALLS</td>
<td>On-net LRN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>After LRN translation, make new routing decision based on new destination.</td>
</tr>
<tr>
<td>321c</td>
<td>C</td>
<td>Carrier</td>
<td>NONE or SUB-ONLY</td>
<td>Off-net LRN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>After LRN translation, make new routing decision based on new destination.</td>
</tr>
</tbody>
</table>

1. DC = Don’t care
2. A. (Result of Translated LRN)
3. B. (Result of Translated LRN)
4. C. (Result of Translated LRN)
Feature Interactions

There are no new, modified, or deleted feature interactions related to the BTS 10200 On-Net Routing and LNP for Inter-CMS Routing feature described in this document. In principle, it should not matter whether or not an LNP query or carrier bypass occurs on the forwarding leg of a forwarded call (e.g., for CFU, CFB, and CFNA). Likewise, it should not matter whether the query is on a second leg of a multi-party call, such as for CT or TWC.

It is possible that an 8xx toll free service query and LNP query occur on the same call. For example, an 8xx number may be dialed which initially needs an 8xx query, and perhaps also an LNP query. The 8xx query is performed first, and then retranslation on the returned number (if present) occurs, and LNP checks are performed again, resulting in the following scenarios:

- The 8xx query returned a carrier and translated DN. As for a normal call, the carrier checks occur first:
  - If the translated DN has a dial plan entry and destination, the LNP checks look at the carrier + translated DN, as applicable
  - If the translated DN does not have a dial plan entry and destination, the original destination is used during the LNP checks on carrier (if present) and translated DN.

Again, for the above scenarios, there is nothing different from normal LNP criteria checks, and likewise the logic for checking the translated LRN, and for the carrier routing after the second translation.

Configuring

This section explains how to perform the following tasks:

- Configuring LNP Queries
- Configuring an LNP Query on a Carrier Call
- Configuring Carrier Bypass (On-net Route)—No LNP Queries
- Configuring Carrier Bypass (On-net Route)—LNP Queries
- Configuring Carrier Bypass (On-net Route)—Multi-BTS 10200 Softswitches
- Configuring Inter-CMS —Subscriber Origination (If No NRS), or Trunk Origination on MGC or Terminating CMS (ALL-CALLS + LNP Query)
- Configuring Inter-CMS with NRS—Same BTS 10200 Acting as CMS and MGC
- Selectively Configuring LNP Queries (Allow or Disallow) for a Particular Call Type
Configuring LNP Queries

For all Destinations resulting from dial plan translations for which an LNP query may be allowed, use the Destination NANP-LNP-QUERY default value NA. For all Carrier entries, use LNP-QUERY default value N.

Specify the NANP-LNP-QUERY value either implicitly using add destination without specifying NANP-LNP-QUERY parameter, or explicitly set it.

For example:

change destination dest-id=local_call; nanp-lnp-query=NA;

Specify Carrier LNP-QUERY = N implicitly by omitting the LNP-QUERY parameter, or explicitly.

For example:

change carrier id=0333; lnp-query=N;

Configuring an LNP Query on a Carrier Call

For all destinations resulting from dial plan translations which could result in Carrier routing (e.g., Destination call-type INTERLATA, TOLL, or CARRIER), the destination NANP-LNP-QUERY should have value PERFORM-LNP-QUERY or NA. If value NA is used, then the appropriate Carrier entry should have either USE-DIAL-PLAN=Y or LNP-QUERY = Y.

For example,

Either:

add destination dest-id=dest_carrier; call-type=INTERLATA; route-type=ROUTE; route-guide-id=carrier_rg; nanp-lnp-query=PERFORM-LNP-QUERY; description=Allow LNP query on Carrier calls;

Or

add destination dest-id=dest_carrier; call-type=INTERLATA; route-type=ROUTE; route-guide-id=carrier_rg; description=nanp-lnp-query has default value NA!;

add carrier id=0333; inter=Y; intra=Y; intl=Y; use-dial-plan=N; route-guide-id=dpc1-rg; cut-thru=N; status=INS; lnp-query=Y; description=Allow an LNP query on calls to this carrier;

add ported-office-code digit-string=703-484;

add dial-plan id=dp_nanp_sub; digit-string=703-484; min-digits=10; max-digits=10; dest-id=dest_carrier;
Configuring Carrier Bypass (On-net Route)—No LNP Queries

The BTS 10200 will route this call to the carrier unless the called DN is a subscriber assigned on this switch and not in a porting transition state. For this scenario, the operator wants carrier bypass for local subscribers, but does not want to incur the overhead of LNP queries for DNs which are in the process of porting in or porting out (LNP-TRIGGER=Y). The operator might know that either A) there are no transition DNs in this switch (or perhaps all are ported-out), or B) there are very few, and the operator would prefer that the Carrier do the LNP query, and route calls back to our switch for a very few calls.

The destination has call-type INTERLATA for Carrier routing, SUB-ONLY to allow carrier bypass for local subs, and NO-LNP-QUERY to force calls needing a query to go to the carrier.

For example:
```
add destination dest-id=carrier_or_sub; call-type=INTERLATA; route-type=SUB;
bypass-carrier-routing=SUB-ONLY; nanp-lnp-query=NO-LNP-QUERY; description=Carrier route unless SUB assigned (no query);
```

Configuring Carrier Bypass (On-net Route)—LNP Queries

The BTS 10200 routes this call to the carrier unless the called DN is a subscriber assigned on this switch. This includes DNs which are in the process of either porting in or porting out. For these transition DNs requiring an "unconditional" (ATIS document terminology), which are marked with Dn2subscriber LNP-TRIGGER=Y, will get an LNP query before the routing decision is made. For the transition DNs for which there is an LNP query, the LNP query results determine whether the call is routed to the Carrier or bypasses the carrier if the subscriber is in this switch.

The Destination has call-type INTERLATA for Carrier routing, SUB-ONLY to allow carrier bypass for local subs, and UNCONDITIONAL-LNP-TRIGGER-QUERY to allow a query for DNs during the transition period.

For example:
```
add destination dest-id=carr_or_sub_lnp; call-type=INTERLATA; route-type=SUB;
bypass-carrier-routing=SUB-ONLY; nanp-lnp-query=UNCONDITIONAL-LNP-TRIGGER-QUERY; description=Carrier unless local SUB (query DNs during porting transition);
```

Mark DN 703-765-4449 as a 'transition DN" in the process of porting in or porting out
```
change dn2subscriber office-code-index=1; dn=4449; lnp-trigger=Y;
```
Configuring Carrier Bypass (On-net Route) — Multi-BTS 10200 Softswitches

For an operator with multiple BTS 10200 softswitches all interconnected over an IP network, it is more efficient for an operator to route calls on-net and avoid routing a call to a carrier, which will only be routed back to another on-net switch. This is the scenario for which the On-net Routing feature was requested. However, to gain the advantage of all-IP on-net routing, there is the cost of additional LNP queries. LNP queries might be required before on-net routing to make sure that the called DN has not ported out of the network.

The Destination NANP-LNP-QUERY PERFORM-LNP-QUERY value is used to ensure that an LNP query is done before on-net routing. Of course, this query is still conditional, depending on whether the Ported Office Code entry exists and other related criteria. The destination call-type is either INTERLATA or TOLL, and the BYPASS-CARRIER-ROUTING value is ALL-CALLS. Three routing scenarios are possible:

1. Route to carrier for off-net call.
2. Route using destination for on-net call to another on-net switch.
3. Route on-net to subscriber in the same switch. Ignore carrier and destination routes.

For example:

```
add destination dest-id=carrier_or_bypass; call-type=INTERLATA; route-type=ROUTE;
route-guide-id=on_net_rg; nanp-lnp-query=PERFORM-LNP-QUERY;
bypass-carrier-routing=ALL-CALLS; description=LNP query, and route to carrier, or on-net;
```

Configuring Inter-CMS — Subscriber Origination (If No NRS), or Trunk Origination on MGC or Terminating CMS (ALL-CALLS + LNP Query)

There are various Inter-CMS scenarios where a BTS 10200, upon receiving an incoming trunk call, should perform an LNP query, and if an on-net route exists, bypass carrier routing. Or for an Inter-CMS network with no NRS, it might be desirable to do LNP queries on the originating CMS.

For example:

- MGC, acting as a PSTN gateway:
  - Call originated from a CMS, within the network — MGC can do an LNP query, and either route off-net or on-net.
  - Incoming call from the PSTN — Normally, the LNP query is done by the PSTN; however, if that does not happen, then the MGC can do an LNP query before routing the call within the network.

- Terminating CMS — For a call originated on-net from a CMS, the call can be routed directly to the terminating CMS, where perhaps an LNP query is needed.

- Originating CMS, e.g., without NRS — It may be desirable to do an LNP query on the originating CMS, in order to route calls to a terminating CMS directly, and avoid routing through the MGC (or Carrier). In particular, doing the LNP query and on-net routing from the originating CMS can be helpful in an Inter-CMS network configuration without an NRS.

The provisioning for this scenario is exactly the same as for Multi-BTS 10200 — Carrier bypass, above.
Configuring Inter-CMS with NRS—Same BTS 10200 Acting as CMS and MGC

Intermediate phases of inter-CMS routing can have a single BTS 10200 acting as the CMS for NCS subscribers, and also acting as an MGC PSTN interface. Essentially this is a combination of cases already shown above. For subscriber originations (CMS), the subscriber dial plans should not allow a query, and ensure that the call is routed on-net to the NRS (if applicable). Incoming trunks calls can be routed from the NRS to this BTS 10200 in case the final destination is a CMS subscriber or PSTN subscriber.

The key to understanding this configuration is realizing that for a subscriber origination, the subscriber dial plan will result in a Destination which does not allow an LNP query and may have an on-net route to the NRS. But for a trunk origination on the same BTS 10200, the incoming trunk dial plan, for the same DN, has a different destination, which will allow an LNP query, and will not bypass the Carrier for calls to the PSTN.

For example:

# Subscriber Destination and Dial Plan; 703-484 is on-net, 301-444 is off-net;
# 703-484 may have DNs ported-out (needs queries).
# 301-444 (off-net) has no ported-in DNs BTS 10200, and does not need dial-plan entry (always carrier routing)

add destination dest-id=cms_sub_nrs; call-type=INTERLATA; route-type=ROUTE;
route-guide-id=nrs_rg; bypass-carrier-routing=ALL-CALLS; nanp-lnp-query=NO-LNP-QUERY;
description=Route all sub originations to NRS with no LNP query;
add dial-plan id=dp_nanp_sub; digit-string=703-484; min-digits=7; max-digits=10;
dest-id=cms_sub_nrs;

# Incoming Trunk Group Destination and Dial Plan:

add destination dest-id=carrier_or_bypass; call-type=INTERLATA; route-type=ROUTE;
route-guide-id=on_net_rg; nanp-lnp-query=PERFORM-LNP-QUERY;
bypass-carrier-routing=ALL-CALLS; description=LNP query, and route to carrier, or on-net;
add destination dest-id=dest_carrier; call-type=INTERLATA; route-type=ROUTE;
route-guide-id=on_net_rg; nanp-lnp-query=NO-LNP-QUERY; bypass-carrier-routing=ALL-CALLS;
description=Carrier will do LNP query;
add ported-office-code digit-string=703-484
add dial-plan id=dp_nanp_sub; digit-string=703-484; min-digits=7; max-digits=10;
dest-id=carrier_or_bypass;
add dial-plan id=dp_nanp_sub; digit-string=301-444; min-digits=7; max-digits=10;
dest-id=dest_carrier;
Selectively Configuring LNP Queries (Allow or Disallow) for a Particular Call Type

A Call Type Profile entry with LNP-QUERY = Y can be added to allow an LNP query for a particular call-type, for example, WEATHER. However, by changing destination LNP criteria, it is possible to allow a query for some weather calls, but not others.

For example:

### Allow a query on Weather DN 703-569-2198

```
add call-type-profile call-type=WEATHER; lnp-query=Y;
add destination dest-id=weather_query; call-type=WEATHER; route-type=ROUTE;
route-guide-id=dpc2-rg; nanp-lnp-query=NA;
add dial-plan id=dp-1; digit-string=703-569-2198; min-digits=10; max-digits=10;
dest-id=weather_query;
add ported-office-code digit-string=703-569-2198;
```

### Do Not Allow a query on Weather DN 703-569-2197

```
add destination dest-id=weather_no_query; call-type=WEATHER; route-type=ROUTE;
route-guide-id=dpc2-rg; nanp-lnp-query=NO-LNP-QUERY;
add dial-plan id=dp-1; digit-string=703-569-2197; min-digits=10; max-digits=10;
dest-id=weather_no_query;
```

Destination

The NANP-LNP-QUERY token used to define LNP criteria requirements for the USA. For complete Destination table details, refer to the “Destination” section on page 1-55.

Carrier Existing LNP-QUERY=Y/N

Previously used for ITU LNP only, now activated for ANSI:

- Allows an LNP query before routing outbound to a carrier, based on the Carrier LNP-QUERY value

When the call is routed to the outbound carrier, if the Carrier LNP-QUERY = N, indicating that the carrier does not expect a query prior to carrier routing, but a query is done anyway on this switch, then the LNP information (LRN, FCI, and GAP) is destroyed.
Call Type Profile

EXISTING table for ITU LNP, now activated for ANSI/North America LNP:

- Prior to this feature, an LNP query was allowed only for calltypes LOCAL, INTERLATA, TOLL, and TOLL-FREE. Now, for NANP-LNP-QUERY values PERFORM-LNP-QUERY and UNCONDITIONAL-LNP-TRIGGER-QUERY, a query may be performed for any call-type. For these NANP-LNP-QUERY values, the Call Type Profile is not checked.

- For NANP-LNP-QUERY value NA, a query is allowed for the existing call-types, (LOCAL, INTERLATA, TOLL, and TOLL-FREE), and now also INTL-WZ1 (World Zone 1). However, it is possible now to selectively allow an LNP query for other call-types by adding a Call Type Profile entry for the call-type, and setting the Call Type Profile LNP-QUERY = Y. Of course, other criteria, such as Ported Office Code match, are still required in order for a query to be performed.

- For NANP-LNP-QUERY value NA, for call-types other than LOCAL, INTERLATA, TOLL, TOLL-FREE and INTL-WZ1, if a Call Type Profile entry for the given call-type (for example, NATIONAL) is not present, or the Call Type Profile entry has LNP-QUERY = N, a query will not be performed.

LNP-QUERY

This flag is used if the ALL-CALL-QUERY flag in the LNP-PROFILE table is set to Y and the ACQ-LNP-QUERY token in the Destination table is set to ACQ-BASED-ON-CALL-TYPE.

International WZ1 (INTL_WZ1) Preferred Carrier Routing

This section describes the preferred carrier (PIC) routing for an international world zone 1 call. In the past releases, the BTS 10200 supported preferred carrier (PIC) routing based on the routing application defined for the North America PSTN environment. Table 2-7 lists the general preferred carrier routing behavior in prior releases of the BTS 10200.

Table 2-7 General Preferred Routing

<table>
<thead>
<tr>
<th>CALL TYPE</th>
<th>PIC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALLTYPE_INTERLATA</td>
<td>PIC1</td>
<td>Uses SUBSCRIBER.PIC1 to route the call. If PIC1 is not provisioned then route the call to POP.LECOSS.</td>
</tr>
<tr>
<td>CALLTYPE_INTL_WZ1</td>
<td>PIC2</td>
<td>If POP.ITP is set to Y then uses SUBSCRIBER.PIC2 to route the call. Otherwise, route the call according to the provisioning defined in DIAL_PLAN.</td>
</tr>
<tr>
<td>CALLTYPE_TOLL</td>
<td>PIC3/PIC1</td>
<td>Uses SUBSCRIBER.PIC3 to route the call if PIC3 is provisioned. If PIC3 is not provisioned then use SUBSCRIBER.PIC1 to route the call. If neither PIC1 nor PIC3 is provisioned then route the call to POP.LECOSS.</td>
</tr>
</tbody>
</table>

Because different customers have different needs regarding the routing for INTL_WZ1 calls, the flexibility of preferred carrier routing for INTL_WZ1 calls has been enhanced as shown in Table 2-8.
There is no change to CALLTYPE_INTERLATA, CALLTYPE_TOLL, and CALLTYPE_INTL. The CALLTYPE_INTL_WZ1 has two different flavors of preferred carrier routing controlled by the CA-CONFIG:INTL_WZ1_USE_PIC3 flag.

For operator assisted calls, there are minor differences between PIC2 and PIC1/PIC3. A call associated with PIC1 or PIC3 is routed to the PIC1/PIC3 carrier if the SUB_PROFILE.EA_USE_PIC1 is set to Y, otherwise the call is routed to POP.LECOSS. A associated with PIC2 is routed to the PIC2 carrier.

When a call is routed to any PICx carrier but the specific carrier does not support it (CARRIER.OP-SERVICES=N), the will be rerouted to POP.LECOSS.

Casual calls are routed to PICx carrier according to the call type if the specified carrier supports casual calls (CARRIER.CASUAL=N), otherwise the call is blocked.
Enhanced preferred routing affects the entire system for CALL TYPE INTL_WZ1 routing. All subscriber originated CALL TYPE INTL_WZ1 calls use preferred carrier routing. In another words, the BTS 10200 does not allow one subscriber to use PIC1 while other subscribers use PIC3 for CALL TYPE INTL_WZ1 calls.

Call Types

This section provides detailed information on the BTS 10200 call types. Information on the following call types is provided:

- 1+ Interlata Call
- 1+ Intralata Call
- 0+ Interlata Call
- 0+ Intralata Call
- Ported-In Call Processing
- Operator Services
1+ Interlata Call

This section provides a detailed description of the BTS 10200 routing and call flow for 1+ interlata calls. Refer to Figure 2-18 for visual representation of the 1+ interlata call routing flow while reviewing the following detailed step-by-step 1+ interlata call routing flow.

**Step 1**  
A 1+ interlata call is received.

**Step 2**  
Determine if a 101XXXX number has been dialed. If a 101XXXX number has been dialed, the BTS 10200 will select the call route and route the call based on the carrier access code (CAC). If a 101XXXX number has not been dialed, proceed to Step 3.

**Step 3**  
Check the subscriber table to determine if a PIC is defined. If a PIC is defined, the BTS 10200 will select the call route and route the call based on the PIC information. If a PIC is not defined, proceed to Step 4.

**Step 4**  
Check the point of presence (POP) table and verify if a block-eawopic is configured. If the a block-eawopic is configured, the BTS 10200 will block the call. If a block-eawopic is not configured, proceed to Step 5.

**Step 5**  
Determine if a local exchange carrier operations support system (LECOSS) is defined in the POP table. If a LECOSS is defined in the POP table, the BTS 10200 will select route the call via the LECOSS. If a LECOSS is not defined in the POP table, the BTS 10200 will block the call.

---

**Figure 2-18  1+ Interlata Call**

---

1+ Intralata Call

This section provides a detailed description of the BTS 10200 routing and call flow for 1+ intralata calls. Refer to Figure 2-19 for visual representation of the 1+ intralata call routing flow while reviewing the following detailed step-by-step 1+ intralata call routing flow.
Step 1  An 1+ intralata call is received.

Step 2  Determine if 101XXXX number has been dialed. If a 101XXXX number has been dialed proceed to Step 3. If a 101XXXX number has not been dialed, proceed to Step 4.

Step 3  Check the carrier table for a carrier access code (CAC). If a CAC is available, the BTS 10200 will select the call route and route the call based on the CAC. If a CAC is not available, proceed to Step 3a.

a. Determine if a LECOSS is defined in the POP table. If a LECOSS is defined in the POP table, the BTS 10200 will select the call route and route the call via the LECOSS. If a LECOSS is not defined in the POP table, the BTS 10200 will block the call.

Step 4  Check the POP table for a configured IP transfer point (ITP). If an ITP is configured, proceed to Step 4a. If an ITP is not configured, the BTS 10200 will route the call via dial plan routing.

a. Check the subscriber table for a specified PIC. If a PIC is specified, proceed to Step 4b. If a PIC is not specified, the BTS 10200 will route the call to the announcement server and will check the POP table for a specified PIC. If a PIC is not specified, the BTS 10200 will block the call or if a dial plan is available, the BTS 10200 will select the call route and route the call according to the dial plan routing information.

b. Check the intra carrier table for a specified PIC. If a PIC is specified in the intra carrier table, the BTS 10200 will select the call route and route the call based on the PIC information. If a PIC is not specified in the intra carrier table, proceed to Step 4c.

c. Determine if a LECOSS is defined in the POP table. If a LECOSS is defined in the POP table, the BTS 10200 will select the call route and route the call via the LECOSS. If a LECOSS is not defined in the POP table, the BTS 10200 will block the call.
Figure 2-19  1+ Intralata Call

1+ intraLATA call

Check Carrier table (Intra)  
No

Check POP table (ITP)  
No

Check Subscriber table for PIC2  
No

Check POP table (PIC2 required)  
Yes

Yes

Route based on CAC

Route through LECOSS

101XXXX dialed  
No

Yes

Route to announcement

No PIC  
No

PIC2 Specified

Yes

Block call

No

Dial plan routing

Block call

Route based on PIC2

No

LECOSS defined in POP table  
Yes

No

Carrier table (Intra)  
Yes

No

Carrier table (Intra)  
No

Check Carrier table (Intra)

Check Subscriber table for PIC2

Check POP table}

Check Carrier table (Intra)

Check Carrier table (Intra)

Check Carrier table (Intra)
0+ Interlata Call

This section provides a detailed description of the BTS 10200 routing and call flow for 0+ interlata calls. Refer to Figure 2-20 for visual representation of the 0+ interlata call routing flow while reviewing the following detailed step-by-step 0+ interlata call routing flow.

**Step 1**
A 0+ interlata call is received.

**Step 2**
Determine if a 101XXXX number has been dialed. If a 101XXXX number has been dialed proceed to Step 3. If a 101XXXX number has not been dialed proceed to Step 5.

**Step 3**
Check the carrier table for a CAC. If a CAC is available, the BTS 10200 will select the call route and route the call based on the CAC. If a CAC is not available, proceed to Step 4.

**Step 4**
Check the POP table for a defined LECOSS. If a LECOSS is defined in the POP table, the BTS 10200 will route the call via the LECOSS. If a LECOSS is not defined in the POP table, the BTS 10200 will block the call.

**Step 5**
Check the subscriber table for a defined PIC. If a PIC is defined in the subscriber table, proceed to Step 6. If a PIC is not defined in the subscriber table, proceed to Step 7.

**Step 6**
Check the subscriber profile for ea-use-pic entry. If the subscriber profile contains an ea-use-pic entry, the BTS 10200 will select the call route and route the call based on the PIC information. If the subscriber profile does not contain an ea-use-pic entry, return to Step 4.

**Step 7**
Check the POP table for a block-eawopic entry. If the POP table contains a block-eawopic entry, the BTS 10200 will block the call. If the POP table does not contain a block-eawopic entry, return to Step 4.

---

**Figure 2-20 0+ Interlata Call**

[Flowchart diagram showing the routing process for 0+ interlata calls, including decision points for CAC availability, LECOSS routing, and PIC validation.]

---
**0+ Intralata Call**

This section provides a detailed description of the BTS 10200 routing and call flow for 0+ intralata calls. Refer to Figure 2-21 for visual representation of the 0+ intralata call routing flow while reviewing the following detailed step-by-step 0+ intralata call routing flow.

---

**Step 1**
A 0+ intralata call is received.

**Step 2**
Determine if a 101XXXX number was dialed. If a 101XXXX number was dialed, proceed to Step 3. If a 101XXXX number was not dialed, proceed to Step 5.

**Step 3**
Check the carrier table for a CAC. If a CAC is available, the BTS 10200 will select the call route and route the call based on the CAC. If a CAC is not available, proceed to Step 4.

**Step 4**
Check the POP table for a defined LECOSS. If a LECOSS is defined in the POP table, the BTS 10200 will route the call via the LECOSS. If a LECOSS is not defined in the POP table, the BTS 10200 will block the call.

**Step 5**
Check the POP table for a configured ITP. If an ITP is configured, proceed to Step 6. If an ITP is not configured return to Step 4.

**Step 6**
Check the subscriber table for a specified PIC. If a PIC is specified, proceed to Step 7. If a PIC is not specified, the BTS 10200 will route the call to the announcement server. Additionally, if a PIC is not specified in the subscriber table, the BTS 10200 will check the POP table for a specified PIC. If a PIC is specified in the POP table, the BTS 10200 will block the call. If a PIC is not specified in the POP table, return to Step 4.

**Step 7**
Check the intra carrier table for the specified PIC. If the specified PIC is included in the intra carrier table, the BTS 10200 will select the call route and route the call based on the PIC information. If the specified PIC is not included in the intra carrier table, return to Step 4.
**Figure 2-21  0+ Intralata Call**

1+ intraLATA call

- **Yes**: 101XXXX dialed
  - **No**: POP table (ITP)
    - **Yes**: Check Subscriber table for PIC2
      - **PIC2 Specified**: Block call
      - **Route based on PIC2**: Yes
        - **No**: Block call
    - **No**: Carrier table (op-services)
      - **Yes**: Route based on CAC
      - **No**: Route through LEOSS

- **Yes**: 101XXXX dialed
  - **No**: Check Carrier table (op-services)
    - **Yes**: Route based on CAC
    - **No**: LEOSS defined in POP table
      - **Yes**: Block call
      - **No**: Block call
Ported-In Call Processing

This section provides a detailed description of the BTS 10200 routing and call flow for ported-in call processing calls. Refer to Figure 2-22 for visual representation of the ported-in call processing call routing flow while reviewing the following detailed step-by-step ported-in call processing call routing flow. Note that in Figure 2-22 the call flow logic applies to American National Standards Institute (ANSI)/North America; for International Telecommunication Union (ITU) local number portability (LNP), the logic is different. For a complete explanation of the call processing logic for ITU LNP, refer to the ITU Local Number Portability Feature Module.

Step 1 A ported-in call is received.
Step 2 The office code is not assigned to the BTS 10200.
Step 3 Determine if the office code is in the ported-in office code table. If the office code is in the ported-in office code table, proceed to Step 4. If the office code is not in the ported-in office code table, perform normal call processing.
Step 4 Determine if the in-call agent flag is set. If the in-call agent flag is set, proceed to Step 5. If the in-call agent flag is not set, the BTS 10200 will perform an LNP query.
Step 5 Determine if the subscriber is included the dn2subscriber table. If the subscriber is included in the dn2subscriber table, proceed to Step 6. If the subscriber is not included in dn2subscriber table, proceed to Step 7.
Step 6 Determine if the LNP trigger flag is set. If the LNP trigger flag is set, the BTS 10200 will perform an LNP query and port out the call. If the LNP trigger flag is not set, the BTS 10200 will check the status field to determine if a LNP trigger has been assigned and will port out the call or terminate the call to the subscriber. Alternately, if dn2subscriber status = PORTED-OUT, or LNP-TRIGGER = Y an LNP query is performed, and depending upon the result of the query (whether or not an local routing number (LRN)/RN is found), the call may be routed to a ported-in DN, routed out to a DN ported-in to another switch, routed in or out if the DN is not ported at all, or the call may fail if routing is not possible.
Step 7 Check the destination table for the subscriber information. Based on the destination table information, the BTS 10200 will route the call or issue a subscriber terminator, release the call, and play the released call announcement. As part of routing the call, the BTS 10200 will perform an LNP query and, if necessary, port out the call.
Figure 2-22 Ported-In Call Processing

1. Office code is not assigned to switch
2. Is office code in Ported Office Code table?
   - No: Perform normal call processing
   - Yes: Is the in-call-agent flag set?
     - No: Do LNP query
     - Yes: Is sub in dn2subscriber table?
       - No: Check the Destination table
       - Yes: Is the LNP-trigger flag set?
         - No: Check the Status field
         - Yes: Terminate to subscriber
3. Route
4. Do LNP query
5. Ported out
6. Assign
7. Subscriber terminator
8. Play announcement and release the call
Operator Services

The Operator Services feature allows routing of operator calls to a Feature Group D Operator Trunk (FGD OS) using the CAS MF Operator Package (MO). The following operator calls are included:

- 0-
- 0+
- 00
- 01+CC+NN
- 10XXXXX + 0-
- 10XXXXX + 0+
- 10XXXXX + 00
- 10XXXXX + 01+CC+NN

The operator call is routed to a CAS MO trunk group by sending the called number followed by information digits (I or II) and the calling number (ANI). All these digits are outpulsed to the CAS MO trunk group using multifrequency (MF) signaling. The information digits and ANI can be delivered in any one of these formats (configurable on a per terminating trunk basis):

- I + 7 digit ANI
- I + 10 digit ANI
- II + 7 digit ANI
- II + 10 digit ANI

Prerequisites

The Dial Plan table must be provisioned with a dial plan for operator calls. An operator CAS MO terminating trunk group must be provisioned.
Supported Interfaces

Table 2-9 shows the interface support between call origination and termination.

Table 2-9 Operator Services Supported Interfaces

<table>
<thead>
<tr>
<th></th>
<th>RGW termination</th>
<th>CAS termination</th>
<th>SS7 termination</th>
<th>ISDN termination</th>
<th>SIP termination</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGW origination</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS origination</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>SS7 origination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>ISDN origination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIP origination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Note: These calls can be terminated to another type of trunk group such as ISDN, SS7, and SIP, but in these cases the calls are treated as regular calls.

Provisioning Operator Services

To provision operator services, perform the following steps:

**Step 1**
Add the CAS trunk group profile and the operator trunk group.

```
add cas-tg-profile id=cas-OPS0; type=MO-10II; oss-sig=y; test-line=n;
```

```
add trunk-grp id=1500; tg-type=CAS; dial-plan-id=dpcas; sel-policy=LRU; direction=outgoing; glare=ODD; tg-profile-id=cas-OPS0; call-agent-id=CA166; status=oos;
```

**Step 2**
Add the operator trunk terminations to the Termination Prefix table.

```
add termination prefix=cas/ops/mo/; mgw-id=224.14:2434; type=TRUNK; mgcp-pkg-type=MO; port-start=1; port-end=24;
```

```
add trunk cic-start=5; cic-end=8; tgn-id=1500; termination-prefix=cas/ops/mo/; mgw-id=224.14:2434; termination-port-start=5; termination-port-end=8;
```

**Step 3**
Add the operator routes.

```
add route id=ops1500; tgn1-id=1500; lcr=y;
```

```
add route-guide id=ops1500; policy-type=route; policy-id=ops1500;
```

**Step 4**
Add the carrier ID and put the carrier in service.

```
add carrier id=0510; intra=y; intl=y; route-guide-id=ops1500; use-dial-plan=y;
```

```
change carrier id=0510; status=ins;
```
Step 5  Add the destination IDs.

add destination dest-id=ops-toll; call-type=toll; route-type=ROUTE;
route-guide-id=ops1502; zero-plus=y;

add destination dest-id=ops-interlata; call-type=interlata; route-type=ROUTE;
route-guide-id=ops1501; zero-plus=y;

add destination dest-id=ops-intl; call-type=intl; route-type=ROUTE;
route-guide-id=ops1503; zero-plus=y;
add dial-plan id=dpcas; digit-string=817-313; reqd-digits=10; dest-id=ops-toll;

Step 6  Add the dial plan and international dial plan.

add dial-plan id=dpcas; digit-string=404-313; reqd-digits=10; dest-id=ops-interlata;

add int1-dial-plan cc=42; min-digits=6; max-digits=16; dest-id=ops-intl;

Policy Based Flexible Routing

The BTS 10200 policy based flexible routing use policy based routing tree decisions to select the call route and to route the call. Flexible routing allows service providers to provision policy based flexible routing by configuring the route guide table using the policy variables. Please note that the order of the policies is provisionable and one or more policies may be assigned. Figure 2-23 illustrates the BTS 10200 flexible routing tree structure. This section includes information describing each of the BTS 10200 policy types.
Each of the following policies are described:

- Policy Day of Year, Day of Week, and Time of Day
- Policy Origin Dependent Routing
- Policy Originating Line Information
- Policy NXX
- Policy Percent
- Policy Point of Presence
- Policy Prefix
- Region Profile
- Policy Region
- Policy Call Type
- Policy Circuit Code
- Policy Server
Policy Day of Year, Day of Week, and Time of Day

The Policy Day of Year, Day of Week, and Time of Day enables the flexible routing of calls via the BTS 10200 by day of year (DOY), day of week (DOW), time of day (TOD). The Policy Time of Day (policy-tod) table provides routing information based on the following values, in order of preference (highest preference to lowest):

- day of year
- day of week
- time of day

Table Name: POLICY_TOD
Table Containment Area: EMS, CA, FSAIN

Command Types

add, audit, change, delete, help, show, sync

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

show policy-tod id=basictime;
add policy-tod id=basictime; doy1=03-01; doy1-policy-type=route;
doy1-policy-id=dallasaustin; start-dow1=mon; stop-dow1=fri; start-time1=07:00;
stop-time1=17:00; policy-type1=per;
policy-id1=texaspercent;default-policy-id=dallasaustin;
change policy-tod id=basictime; doy2=07-04;
delete policy-tod id=basictime;

Usage Guidelines

Primary Key Token(s): ID

Foreign Key Token(s): doy n -policy-type plus the doy n -policy-id, policy-type n plus the policy-id n

Add Rules: ID exists in the Policy Profile table.

Change Rules: POLICY_ID exists in policy-<policy-type>::id if entered.
### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO_REFRESH</td>
<td>Specifies whether to display cached data on the screen.</td>
<td>CHAR(1): Y/N (Default = Y). Y—Queries the database for the most current data. N—Queries the database for the most current data only if the cached data is unavailable.</td>
</tr>
<tr>
<td>DEFAULT_POLICY_ID</td>
<td>Use default policy ID when there is no match with the above schedule. Assigned by service provider.</td>
<td>VARCHAR(16): 1-16 ASCII characters. Valid for Command: audit, sync, show Possible Value: [1_16]</td>
</tr>
<tr>
<td>DEFAULT_POLICY_TYPE</td>
<td>Points to the default policy type to use if the next route is not found in the Policy table. Policy routing continues until policy-type=route or policy-nxx is reached. All policy types except Route point to the Policy Type table where type = ctype odr tod percent prefix oli pop nxx. If policy-type = route, the Route table is used for routing. The policy-id is used to index to the Policy or Route table. Some examples are: If policy-type=tod, then the Policy TOD table is indexed with policy-id. If policy-type=route, then the Route table is indexed with policy-id.</td>
<td>VARCHAR(7): 1-7 ASCII characters. Permitted values are: CC—Circuit code based routing. CTYPE—Call type based routing. NXX—Use translated DN. ODR—Origin dependent routing. OLI—Originating line information. POP—Point of presence. PERCENT—Percentage based routing. PREFIX—Prefix-based Routing. REGION—Region based Routing ROUTE—Go to Route table. TOD—Time of day routing.</td>
</tr>
</tbody>
</table>
### DISPLAY
**Description:** Specifies what token information to display on the screen.

**VARCHAR(1024):** 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.

Valid for Command: show

Possible Value: [1_1024]

Parser: TextParser

### DOY1
**Description:** Month and day (day of year provisioning).

**CHAR(5):** 5 characters in the format mm-dd.

Valid for Command: add, change, audit, sync, show

Possible Value: [5_5]

Parser: DateParse

### DOY1_POLICY_ID
**Description:** ID of the Policy or Route table that matches the policy type. Indexes the ID to the type. Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.

Examples:
- If policy-type=tod, then policy-tod table is indexed with policy-id.
- If policy-type=route, then Route table is indexed with policy-id.

**VARCHAR(16):** 1-16 ASCII characters.

Valid for Command: add, change, audit, sync, show

Possible Value: [1_16]

Parser: TextParser
**DOY1_POLICY_TYPE**  
Description: Foreign key: doyn-policy-type plus the doyn-policy-id to Policy Profile table. Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the policy-type table where Stype = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.

Examples:
If policy-type=tod, then policy-tod table is indexed with policy-id.
If policy-type=route, then Route table is indexed with policy-id.

VARCHAR(7): 1-7 ASCII characters. Permitted values are:
- CC—Circuit Code based routing.
- CTYPE—Call Type based routing.
- NXX—Use translated DN.
- ODR—Origin Dependent Routing.
- OLI—Originating line information.
- PERCENT—Percentage based routing.
- POP—Point of presence.
- PREFIX—Prefix-based routing.
- REGION—Region-based routing.
- ROUTE—Go to Route table.
- TOD—Time-of-day routing.

Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

**DOY10**  
Description: Month and day (day of year provisioning).
CHAR(5): 5 characters in the format mm-dd.

Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: DateParser

**DOY10_POLICY_ID**  
Description: See DOY1-POLICY-ID.

VARCHAR(16): 1-16 ASCII characters.

Valid for Command: add, change, audit, sync, show
Possible Value: [1_16]
Parser: TextParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Command</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOY10_POLICY_TYPE</td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY2</td>
<td>Description: Month and day (day of year provisioning).</td>
<td>CHAR(5)</td>
<td>add, change, audit, sync, show</td>
<td>[5_5]</td>
<td>DateParser</td>
</tr>
<tr>
<td>DOY2_POLICY_ID</td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY3</td>
<td>Description: Month and day (day of year provisioning).</td>
<td>CHAR(5)</td>
<td>add, change, audit, sync, show</td>
<td>[5_5]</td>
<td>DateParser</td>
</tr>
<tr>
<td>DOY3_POLICY_ID</td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY3_POLICY_TYPE</td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
### DOY4
Description: Month and day (day of year provisioning).
CHAR(5): 5 characters in the format mm-dd.
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: DateParser

### DOY4_POLICY_ID
Description: See DOY1-POLICY-ID.
VARCHAR(16): 1-16 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_16]
Parser: TextParser

### DOY4_POLICY_TYPE
Description: See DOY1-POLICY-TYPE.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

### DOY5
Description: Month and day (day of year provisioning).
CHAR(5): 5 characters in the format mm-dd.
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: DateParser

### DOY5_POLICY_ID
Description: See DOY1-POLICY-ID.
VARCHAR(16): 1-16 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_16]
Parser: TextParser

### DOY5_POLICY_TYPE
Description: See DOY1-POLICY-TYPE.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

### DOY6
Description: Month and day (day of year provisioning).
CHAR(5): 5 characters in the format mm-dd.
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: DateParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid Commands</th>
<th>Possible Values</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOY6_POLICY_ID</td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY6_POLICY_TYPE</td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY7</td>
<td>Description: Month and day (day of year provisioning).</td>
<td>CHAR(5)</td>
<td>add, change, audit, sync, show</td>
<td>[5_5]</td>
<td>DateParser</td>
</tr>
<tr>
<td>DOY7_POLICY_ID</td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY7_POLICY_TYPE</td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
<tr>
<td>DOY8</td>
<td>Description: Month and day (day of year provisioning).</td>
<td>CHAR(5)</td>
<td>add, change, audit, sync, show</td>
<td>[5_5]</td>
<td>DateParser</td>
</tr>
<tr>
<td>DOY8_POLICY_ID</td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>Column</td>
<td>Description</td>
<td>Type</td>
<td>Valid for Command</td>
<td>Possible Value</td>
<td>Parser</td>
</tr>
<tr>
<td>--------</td>
<td>-------------</td>
<td>------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>DOY8_POLICY_TYPE</strong></td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7): 1-7 ASCII characters.</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
<tr>
<td><strong>DOY9</strong></td>
<td>Description: Month and day (day of year provisioning).</td>
<td>CHAR(5): 5 characters in the format mm-dd.</td>
<td>add, change, audit, sync, show</td>
<td>[5-5]</td>
<td>DateParser</td>
</tr>
<tr>
<td><strong>DOY9_POLICY_ID</strong></td>
<td>Description: See DOY1-POLICY-ID.</td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td>add, change, audit, sync, show</td>
<td>[1-16]</td>
<td>TextParser</td>
</tr>
<tr>
<td><strong>DOY9_POLICY_TYPE</strong></td>
<td>Description: See DOY1-POLICY-TYPE.</td>
<td>VARCHAR(7): 1-7 ASCII characters.</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
<td>TextParser</td>
</tr>
<tr>
<td><strong>ID</strong></td>
<td>Description: Primary key. Unique identifier for this policy-tod. Assigned by service provider.</td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td>add, change, show, delete, audit, sync</td>
<td>[1-16]</td>
<td>TextParser</td>
</tr>
<tr>
<td><strong>LIMIT</strong></td>
<td>Description: Specifies the number of rows to display on the screen.</td>
<td>INTEGER: 1-100000000 (Default = 100000000)</td>
<td>show</td>
<td>[1-100000000]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td><strong>MASTER</strong></td>
<td>Valid for Command: sync</td>
<td></td>
<td>sync</td>
<td>[1-10]</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
### ORDER
Description: Specifies whether to display data on the screen in a sorted order. 
VARCHAR(1024): 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma. 
Valid for Command: show 
Possible Value: [1_1024] 
Parser: TextParser

### PLATFORM_STATE
Description: Audits a shared memory database. 
VARCHAR(7): 1-7 ASCII characters. Permitted values are: 
ACTIVE (Default) - System is currently running. 
STANDBY. 
Valid for Command: sync, audit 
Default Value: ACTIVE 
Possible Value: ACTIVE, STANDBY 
Parser: TextParser

### POLICY_ID1
Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type. 
VARCHAR(16): 1-16 ASCII characters. 
Valid for Command: add, change, audit, sync, show 
Possible Value: [1_16] 
Parser: TextParser

### POLICY_ID10
Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type. 
VARCHAR(16): 1-16 ASCII characters. 
Valid for Command: add, change, audit, sync, show 
Possible Value: [1_16] 
Parser: TextParser

### POLICY_ID2
Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type. 
VARCHAR(16): 1-16 ASCII characters. 
Valid for Command: add, change, audit, sync, show 
Possible Value: [1_16] 
Parser: TextParser

### POLICY_ID3
Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type. 
VARCHAR(16): 1-16 ASCII characters. 
Valid for Command: add, change, audit, sync, show 
Possible Value: [1_16] 
Parser: TextParser
| POLICY_ID4 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
|---|---|
| POLICY_ID5 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID6 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID7 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID8 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID9 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
POLICY_TYPE1
Description: Foreign key: policy-typen plus the policy-idn to Policy Profile table. Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the policy-Stype table where Stype = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.
Examples:
If policy-type=tod, then policy-tod table is indexed with policy-id.
If policy-type=route, then Route table is indexed with policy-id.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

POLICY_TYPE10
Description: See POLICY-TYPE1.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

POLICY_TYPE2
Description: See POLICY-TYPE1.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

POLICY_TYPE3
Description: See POLICY-TYPE1.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser

POLICY_TYPE4
Description: See POLICY-TYPE1.
VARCHAR(7): 1-7 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
Parser: TextParser
<table>
<thead>
<tr>
<th>Policy Type</th>
<th>Description</th>
<th>Type</th>
<th>Valid Commands</th>
<th>Possible Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLICY_TYPE5</td>
<td>Description: See POLICY-TYPE1.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td>POLICY_TYPE6</td>
<td>Description: See POLICY-TYPE1.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td>POLICY_TYPE7</td>
<td>Description: See POLICY-TYPE1.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td>POLICY_TYPE8</td>
<td>Description: See POLICY-TYPE1.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td>POLICY_TYPE9</td>
<td>Description: See POLICY-TYPE1.</td>
<td>VARCHAR(7)</td>
<td>add, change, audit, sync, show</td>
<td>CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td><strong>START_DOW1</strong></td>
<td>Description: Day of week that this policy begins (day of week provisioning). Start-dow1 and stop-dow1 define a range of days. The DOW begins on MON and ends on SUN, such as when specifying range, START-DOWn = STOP-DOWn. CHAR(3). Permitted values are: MON—Monday TUE—Tuesday WED—Wednesday THU—Thursday FRI—Friday SAT—Saturday SUN—Sunday Examples: START-DOW1=MON; STOP-DOW1=FRI; is valid. START-DOW1=FRI; STOP-DOW1=MON; is invalid. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>START_DOW10</strong></td>
<td>Description: See START-DOW1. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>START_DOW2</strong></td>
<td>Description: See START-DOW1. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>START_DOW3</strong></td>
<td>Description: See START-DOW1. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>START_DOW4</strong></td>
<td>Description: See START-DOW1. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>START_DOW5</strong></td>
<td>Description: See START-DOW1. Valid for Command: add, change, audit, sync, show Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
<td>Valid for Command</td>
<td>Possible Value</td>
<td>Parser</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>START_DOW6</td>
<td>Description: See START-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_DOW7</td>
<td>Description: See START-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_DOW8</td>
<td>Description: See START-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_DOW9</td>
<td>Description: See START-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_ROW</td>
<td>Description: Specifies to begin displaying data on the screen at a specific row. Valid only for the show command.</td>
<td>show</td>
<td>1-100000000 (Default = 1).</td>
<td>DecimalParser</td>
</tr>
<tr>
<td></td>
<td>INTEGER: 1-100000000 (Default = 1).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Default Value: 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_100000000]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_TIME1</td>
<td>Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).</td>
<td>add, change, audit, sync, show</td>
<td>5_5</td>
<td>TimeParser</td>
</tr>
<tr>
<td></td>
<td>CHAR(5): HH:MM.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [5_5]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TimeParser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>START_TIME10</td>
<td>Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).</td>
<td>add, change, audit, sync, show</td>
<td>5_5</td>
<td>TimeParser</td>
</tr>
<tr>
<td></td>
<td>CHAR(5): HH:MM.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possible Value: [5_5]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Parser: TimeParser</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| START_TIME2 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
| --- |
| START_TIME3 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
| START_TIME4 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
| START_TIME5 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
| START_TIME6 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
| START_TIME7 | Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).  
CHAR(5): HH:MM.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [5_5]  
Parser: TimeParser |
START_TIME8
Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).
CHAR(5): HH:MM.
Valid for Command: add, change, audit, sync, show
Possible Value: [0_23]
Parser: TimeParser

START_TIME9
Description: The time in hours and minutes (24-hour clock) that this policy starts (time of day provisioning).
CHAR(5): HH:MM.
Valid for Command: add, change, audit, sync, show
Possible Value: [0_23]
Parser: TimeParser

STOP_DOW1
Description: Day of week that this policy ends. Start-dow1 and stop-dow1 define a range of days.
The DOW begins on MON and ends on SUN, such as when specifying range, START-DOWn = STOP-DOWn.
CHAR(3). Permitted values are:
MON—Monday
TUE—Tuesday
WED—Wednesday
THU—Thursday
FRI—Friday
SAT—Saturday
SUN—Sunday
Examples:
START-DOW1=MON; STOP-DOW1=FRI; is valid.
START-DOW1=FRI; STOP-DOW1=MON; is invalid.
Valid for Command: add, change, audit, sync, show
Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT
Parser: TextParser

STOP_DOW10
Description: See STOP-DOW1.
Valid for Command: add, change, audit, sync, show
Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT
Parser: TextParser

STOP_DOW2
Description: See STOP-DOW1.
Valid for Command: add, change, audit, sync, show
Possible Value: SUN, MON, TUE, WED, THU, FRI, SAT
Parser: TextParser
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Valid for Command</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOP_DOW3</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW4</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW5</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW6</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW7</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW8</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_DOW9</td>
<td>Description: See STOP-DOW1.</td>
<td>add, change, audit, sync, show</td>
<td>SUN, MON, TUE, WED, THU, FRI, SAT</td>
<td>TextParser</td>
</tr>
<tr>
<td>STOP_TIME1</td>
<td>Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).</td>
<td>add, change, audit, sync, show</td>
<td>[5_5]</td>
<td>TimeParser</td>
</tr>
</tbody>
</table>

CHAR(5): HH:MM
STOP_TIME10 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser

STOP_TIME2 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser

STOP_TIME3 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser

STOP_TIME4 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser

STOP_TIME5 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser

STOP_TIME6 Description: The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).
CHAR(5): HH:MM
Valid for Command: add, change, audit, sync, show
Possible Value: [5_5]
Parser: TimeParser
### Policy Based Flexible Routing

#### STOP_TIME7
**Description:** The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).

- **CHAR(5):** HH:MM
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [5_5]
- **Parser:** TimeParser

#### STOP_TIME8
**Description:** The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).

- **CHAR(5):** HH:MM
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [5_5]
- **Parser:** TimeParser

#### STOP_TIME9
**Description:** The time in hours and minutes (24-hour clock) that this policy ends (time of day provisioning).

- **CHAR(5):** HH:MM
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [5_5]
- **Parser:** TimeParser

#### TARGET
**Description:** Specifies the network element to receive the request.

- **VARCHAR(5):** 1-5 ASCII characters. Permitted values are:
  - CA—Network identifier of a Call Agent.
  - FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.
  - FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.
- **Valid for Command:** sync
- **Mandatory:** sync
- **Possible Value:** [1_10]
- **Parser:** TextParser

#### TYPE
**Description:** Type of audit. Valid for the audit database command.

- **VARCHAR(10):** 1-10 ASCII characters. Permitted values are:
  - FULL (Default)—Audits the entire table.
  - ROW-COUNT—Audits the table by row count.
- **Valid for Command:** show
- **Possible Value:** TOD
- **Parser:** TextParser

---
Policy Origin Dependent Routing

The Policy Origin Dependent Routing (policy-odr) table is used for origin-dependent routing. The NPA (or NPA-NXX) of the calling party number selects a route. If no match is found based on the calling party number, the route marked as default routes the call.

Table Name: POLICY_ODR
Table Containment Area: EMS, CA, FSAIN

Command Types
add, audit, change, delete, help, show, sync

Caution
The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples
show policy-odr id=ca200; digit-string=512;
add policy-odr id=ca200; digit-string=512; policy-type=tod; policy-id=tod101;
change policy-odr id=ca200; digit-string=512; policy-type=tod; policy-id=tod102;
delete policy-odr id=ca200; digit-string=512;

Usage Guidelines
Primary Key Token(s): ID, DIGIT_STRING
Add Rules: policy-id exists in policy-<policy-type>::id if entered.
Change Rules: policy-id exists in policy-<policy-type>::id if entered.
Delete Rules: id does not exist in any <route-guide, policy-region, policy-percent, policy-tod, policy-prefix, policy-oli, or policy-pop>::policy-id where policy-type = odr.
## Syntax Description

### AUTO_REFRESH
- **Description:** Specifies whether to display cached data on the screen.
- **CHAR(1):** Y/N (Default = Y).
  - Y—Queries the database for the most current data.
  - N—Queries the database for the most current data only if the cached data is unavailable.
- **Valid for Command:** show
- **Default Value:** Y
- **Possible Value:** Y, N
- **Parser:** BooleanParser

### DIGIT_STRING
- **Description:** Primary key. Longest match based on the calling party number. The calling party number can be specified as the NDC, NDC+EC or the full DN.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, show, delete, audit, sync
- **Mandatory:** add, change, delete
- **Possible Value:** [1_14]
- **Parser:** GenericDNWithDefaultParser

### DISPLAY
- **Description:** Specifies what token information to display on the screen.
- **VARCHAR(1024):** 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
- **Valid for Command:** show
- **Possible Value:** [1_1024]
- **Parser:** TextParser

### ID
- **Description:** Primary key. Policy-odr identification field. Assigned by service provider.
- **VARCHAR(16):** 1-16 ASCII characters.
- **Valid for Command:** add, change, show, delete, audit, sync
- **Mandatory:** add, change, delete
- **Possible Value:** [1_16]
- **Parser:** TextParser

### LIMIT
- **Description:** Specifies the number of rows to display on the screen.
- **INTEGER:** 1-100000000 (Default = 100000000).
- **Valid for Command:** show
- **Default Value:** 100000000
- **Possible Value:** [1_100000000]
- **Parser:** DecimalParser
<table>
<thead>
<tr>
<th>MASTER</th>
<th>Valid for Command: sync</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory: sync</td>
<td></td>
</tr>
<tr>
<td>Possible Value: [1_10]</td>
<td></td>
</tr>
<tr>
<td>Parser: TextParser</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ORDER</th>
<th>Description: Specifies whether to display data on the screen in a sorted order.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARCHAR(1024): 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.</td>
<td></td>
</tr>
<tr>
<td>Valid for Command: show</td>
<td></td>
</tr>
<tr>
<td>Possible Value: [1_1024]</td>
<td></td>
</tr>
<tr>
<td>Parser: TextParser</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLATFORM_STATE</th>
<th>Description: Audits a shared memory database.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARCHAR(7): 1-7 ASCII characters. Permitted values are:</td>
<td></td>
</tr>
<tr>
<td>ACTIVE (Default) - System is currently running.</td>
<td></td>
</tr>
<tr>
<td>STANDBY.</td>
<td></td>
</tr>
<tr>
<td>Valid for Command: sync, audit</td>
<td></td>
</tr>
<tr>
<td>Default Value: ACTIVE</td>
<td></td>
</tr>
<tr>
<td>Possible Value: ACTIVE, STANDBY</td>
<td></td>
</tr>
<tr>
<td>Parser: TextParser</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POLICY_ID</th>
<th>Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td></td>
</tr>
<tr>
<td>Valid for Command: add, change, audit, sync, show</td>
<td></td>
</tr>
<tr>
<td>Mandatory: add</td>
<td></td>
</tr>
<tr>
<td>Possible Value: [1_16]</td>
<td></td>
</tr>
<tr>
<td>Parser: TextParser</td>
<td></td>
</tr>
</tbody>
</table>
Policy Based Flexible Routing

**POLICY_TYPE**

Description: Points to the next policy type table to use in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the Policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.

VARCHAR(7): 1-7 ASCII characters. Permitted values are:

- CC—Circuit Code based routing
- CTYPE—Call Type based routing
- NXX—Use translated DN.
- ODR—Origin Dependent Routing.
- OLI—Originating line information.
- PERCENT—Percentage based routing
- POP—Point of presence.
- PREFIX—Prefix-based routing.
- REGION—Region-based routing.
- ROUTE—Go to Route table.
- TOD—Time-of-day routing.

Valid for Command: add, change, audit, sync, show

Mandatory: add

Possible Value: CC, CTYPE, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION, ODR

Parser: TextParser

**START_ROW**

Description: Specifies to begin displaying data on the screen at a specific row.

INTEGER: 1-100000000 (Default = 1).

Valid for Command: show

Default Value: 1

Possible Value: [1_100000000]

Parser: DecimalParser
| **TARGET** | **Description:** Specifies the network element to receive the request.  
VARCHAR(5): 1-5 ASCII characters. Permitted values are:  
CA—Network identifier of a Call Agent.  
FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.  
FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.  
Valid for Command: sync  
Mandatory: sync  
Possible Value: [1_10]  
Parser: TextParser |
<table>
<thead>
<tr>
<th>TYPE</th>
<th>Description: Mandatory for the change command. Specifies what measurements the traffic subsystem supports.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VARCHAR(10): 1-10 ASCII characters. Permitted values are:</td>
</tr>
<tr>
<td>AIN-SVC</td>
<td>Advanced Intelligent Network server</td>
</tr>
<tr>
<td>AIN-TOOLS</td>
<td>Advanced Intelligent Network tools</td>
</tr>
<tr>
<td>ANM</td>
<td>Announcement Module</td>
</tr>
<tr>
<td>AUDIT</td>
<td>Audit BILLING—Billing</td>
</tr>
<tr>
<td>CALLP</td>
<td>Call Processing</td>
</tr>
<tr>
<td>CALL-TOOLS</td>
<td>Call tools</td>
</tr>
<tr>
<td>CPU</td>
<td>Computer Processor Unit</td>
</tr>
<tr>
<td>DISK</td>
<td>Disk drive</td>
</tr>
<tr>
<td>DISK_IO</td>
<td>Disk drive input/output</td>
</tr>
<tr>
<td>DQOS</td>
<td>Dynamic Quality of Service</td>
</tr>
<tr>
<td>EM</td>
<td>Event Messaging (Billing)</td>
</tr>
<tr>
<td>H323</td>
<td>H.323 INAP—Intelligent Network Application Protocol</td>
</tr>
<tr>
<td>ISDN</td>
<td>Integrated Services Digital Network</td>
</tr>
<tr>
<td>ISUP</td>
<td>ISDN User Part (SS7)</td>
</tr>
<tr>
<td>M3UA</td>
<td>M3UA signaling protocol</td>
</tr>
<tr>
<td>MEMORY</td>
<td>System memory</td>
</tr>
<tr>
<td>MGCP</td>
<td>Media Gateway Control Protocol</td>
</tr>
<tr>
<td>NETWORK_IO</td>
<td>Network input/output</td>
</tr>
<tr>
<td>PCT-TOOLS</td>
<td>PCT tools</td>
</tr>
<tr>
<td>POTS-FS</td>
<td>POTS Feature Server</td>
</tr>
<tr>
<td>SCCP</td>
<td>Signaling Connection Control Part protocol</td>
</tr>
<tr>
<td>SCTP</td>
<td>SCTP signaling protocol</td>
</tr>
<tr>
<td>SIA</td>
<td>SIP interface adapter</td>
</tr>
<tr>
<td>SIM</td>
<td>Service Interaction Manager</td>
</tr>
<tr>
<td>SNMP</td>
<td>Signaling Network Management Protocol</td>
</tr>
<tr>
<td>SUA</td>
<td>SUA signaling protocol</td>
</tr>
<tr>
<td>SYSTEM</td>
<td>System TCAP—Transactional Capabilities Application Part protocol</td>
</tr>
<tr>
<td>TG-USG</td>
<td>Trunk Group usage TSA—TCAP Signaling Adapter (TSA) application</td>
</tr>
<tr>
<td>Valid for Command</td>
<td>add, show, change, delete</td>
</tr>
<tr>
<td>Mandatory</td>
<td>add, change, delete</td>
</tr>
<tr>
<td>Possible Value</td>
<td>[1_50]</td>
</tr>
<tr>
<td>Parser</td>
<td>TextParser.toUpperCase()</td>
</tr>
</tbody>
</table>

Policy Originating Line Information

The Policy Originating Line Information enables the flexible routing of calls via the BTS 10200 by the use of originating line information (OLI). The Policy Originating Line Information performs routing based on the originating line information of the calling party number.

Table Name: POLICY_OLI
Table Containment Area: EMS, CA, FSAIN

Command Types

add, audit, change, delete, help, show, sync

Caution

The *sync* command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

```plaintext
show policy-oli id=normalroute; oli=00;
add policy-oli id=normalroute; oli=00; policy-type=tod; policy-id=holiday;
change policy-oli id=normalroute; oli=00; policy-type=tod; policy-id=regular;
delete policy-oli id=normalroute; oli=00;
```

Usage Guidelines

Primary Key Token(s): ID, OLI

Add Rules: policy-id exists in policy-<policy-type>::id if entered.
Change Rules: policy-id exists in policy-<policy-type>::id if entered.
Delete Rules: id does not exist in any <route-guide, policy-odr, policy-region, policy-percent, policy-tod, policy-prefix, or policy-pop>::policy-id where policy-type = oli.
### Syntax Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| **AUTO_REFRESH** | Specifies whether to display cached data on the screen.  
  CHAR(1): Y/N (Default = Y).  
  Y—Queries the database for the most current data.  
  N—Queries the database for the most current data only if the cached data is unavailable.  
  Valid for Command: show  
  Default Value: Y  
  Possible Value: Y, N  
  Parser: BooleanParser |
| **DISPLAY** | Specifies what token information to display on the screen.  
  VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.  
  Valid for Command: show  
  Possible Value: [1_1024]  
  Parser: TextParser |
| **ID** | Primary key. Originating line information identification field.  
  Assigned by service provider.  
  VARCHAR(16): 1-16 ASCII characters.  
  Valid for Command: add, change, show, delete, audit, sync  
  Mandatory: add, change, delete  
  Possible Value: [1_16]  
  Parser: TextParser |
| **LIMIT** | Specifies the number of rows to display on the screen.  
  INTEGER: 1-100000000 (Default = 100000000).  
  Valid for Command: show  
  Default Value: 100000000  
  Possible Value: [1_100000000]  
  Parser: DecimalParser |
| **MASTER** | Valid for Command: sync  
  Mandatory: sync  
  Possible Value: [1_10]  
  Parser: TextParser |
| **OLI** | Primary key. Originating line information parameter.  
  SMALLINT: 0-99.  
  Valid for Command: add, change, show, delete, audit, sync  
  Mandatory: add, change, delete  
  Possible Value: [0_99]  
  Parser: DecimalParser |
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Command</th>
<th>Default Value</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORDER</td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
<td>VARCHAR(1024)</td>
<td>show</td>
<td></td>
<td>[1_1024]</td>
<td>TextParser</td>
</tr>
<tr>
<td>PLATFORM_STATE</td>
<td>Audits a shared memory database.</td>
<td>VARCHAR(7)</td>
<td>sync, audit</td>
<td>ACTIVE</td>
<td>ACTIVE, STANDBY</td>
<td>TextParser</td>
</tr>
<tr>
<td>POLICY_ID</td>
<td>ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.</td>
<td>VARCHAR(16)</td>
<td>add, change, audit, sync, show</td>
<td></td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
### POLICY_TYPE

Description: Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the Policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.

Examples:
- If policy-type=tod, then the policy-tod table is indexed with policy-id.
- If policy-type=route, then the route table is indexed with policy-id.

VARCHAR(7): 1-7 ASCII characters. Permitted values are:
- CC—Circuit Code based routing.
- CTYPE—Call Type based routing.
- NXX—Use translated DN.
- ODR—Origin Dependent Routing.
- OLI—Originating line information.
- PERCENT—Percentage based routing.
- POP—Point of presence.
- PREFIX—Prefix-based routing.
- REGION—Region-based routing.
- ROUTE—Go to Route table.
- TOD—Time-of-day routing.

Valid for Command: add, audit, change, show, sync

Mandatory: add

Possible Value: CC, CTYPE, NXX, ODR, OLI, POP, PERCENT, PREFIX, REGION, ROUTE, TOD

Parser: TextParser

### START_ROW

Description: Specifies to begin displaying data on the screen at a specific row.

INTEGER: 1-100000000 (Default = 1).

Valid for Command: show

Default Value: 1

Possible Value: [1_100000000]

Parser: DecimalParser
| TARGET | Description: Specifies the network element to receive the request. VARCHAR(5): 1-5 ASCII characters. Permitted values are: CA—Network identifier of a Call Agent. FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server. FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers. Valid for Command: sync Mandatory: sync Possible Value: [1_10] Parser: TextParser |
| TYPE | Description: Mandatory for the change command. Specifies what measurements the traffic subsystem supports.  
VARCHAR(10): 1-10 ASCII characters. Permitted values are:  
AIN-SVC—Advanced Intelligent Network server  
AIN-TOOLS—Advanced Intelligent Network tools  
ANM—Announcement Module  
AUDIT—Audit BILLING—Billing  
CALLP—Call Processing  
CALL-TOOLS—Call tools  
CPU—Computer Processor Unit  
DISK—Disk drive DISK_IO—Disk drive input/output DQOS—Dynamic Quality of Service  
ISDN—Integrated Services Digital Network  
ISUP—ISDN User Part (SS7)  
M3UA—M3UA signaling protocol  
MEMORY—System memory  
MGCP—Media Gateway Control Protocol  
NETWORK_IO—Network input/output  
PCT-TOOLS—PCT tools  
POTS-FS—POTS Feature Server  
SCCP—Signaling Connection Control Part protocol  
SCTP—SCTP signaling protocol  
SIA—SIP interface adapter  
SIM—Service Interaction Manager  
SNMP—Signaling Network Management Protocol  
SUA—SUA signaling protocol  
SYSTEM—System TCAP—Transactional Capabilities Application Part protocol  
TG-USG—Trunk Group usage TSA—TCAP Signaling Adapter (TSA) application  
Valid for Command: add, show, change, delete, audit, sync  
Mandatory: add, change, delete  
Possible Value: [1_50]  
Parser: TextParser.toUpperCase() |
Policy NXX

The Policy NXX (policy-nxx) table is used when a number services call results in a translated number, carrier ID, translated number and a carrier ID, or a route ID.

Note
As of Release 5.0, the original call type is preserved in billing when the routing number is changed using the Policy NXX table.

Table Name: POLICY_NXX
Table Containment Area: EMS, CA, FSAIN

Command Types
add, audit, change, delete, help, show, sync

Caution
The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples
show policy-nxx id=normalroute;
add policy-nxx id=normalroute;
change policy-nxx id=normalroute; carrier=1234;
delete policy-nxx id=normalroute;

Usage Guidelines
Primary Key Token(s): ID
Add Rules: id plus type must exist in the Policy Profile table.

Note
Both the carrier and the translated-dn can be entered; however, if route is entered, neither the carrier-id nor the translated-dn can be entered.
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Command</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO_REFRESH</td>
<td>Specifies whether to display cached data on the screen.</td>
<td>CHAR(1): Y/N (Default = Y).</td>
<td>show</td>
<td>Y, N</td>
<td>BooleanParser</td>
</tr>
<tr>
<td></td>
<td>Y—Queries the database for the most current data.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N—Queries the database for the most current data only if the cached data is</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unavailable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Specifies what token information to display on the screen.</td>
<td>VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted</td>
<td>show</td>
<td>[1_1024]</td>
<td>TextParser</td>
</tr>
<tr>
<td></td>
<td>values are any valid token that can be shown for this command. Multiple</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>tokens can be entered by separating with a comma.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Primary key. Policy-nxx identification field.</td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td>add, change, show, delete, audit, sync</td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>LIMIT</td>
<td>Specifies the number of rows to display on the screen.</td>
<td>INTEGER: 1-100000000 (Default = 100000000).</td>
<td>show</td>
<td>[1_100000000]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td>MASTER</td>
<td>Valid for Command: sync</td>
<td></td>
<td>sync</td>
<td>[1_10]</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
### ORDER
Description: Specifies whether to display data on the screen in a sorted order.
VARCHAR(1024): 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
Valid for Command: show
Possible Value: [1_1024]
Parser: TextParser

### PLATFORM_STATE
Description: Audits a shared memory database.
VARCHAR(7): 1-7 ASCII characters. Permitted values are:
ACTIVE (Default) - System is currently running.
STANDBY.
Valid for Command: sync, audit
Default Value: ACTIVE
Possible Value: ACTIVE, STANDBY
Parser: TextParser

### ROUTE
Description: Defines a list of trunk groups.
VARCHAR(16): 1-16 ASCII characters.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_16]
Parser: TextParser

### START_ROW
Description: Specifies to begin displaying data on the screen at a specific row.
INTEGER: 1-100000000 (Default = 1).
Valid for Command: show
Default Value: 1
Possible Value: [1_100000000]
Parser: DecimalParser

### TARGET
Description: Specifies the network element to receive the request.
VARCHAR(5): 1-5 ASCII characters. Permitted values are:
CA—Network identifier of a Call Agent.
FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.
FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.
Valid for Command: sync
Mandatory: sync
Possible Value: [1_10]
Parser: TextParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Format</th>
<th>Valid for Commands</th>
<th>Possible Values</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSLATED_DN</td>
<td>The call is routed to the translated DN.</td>
<td>VARCHAR(14): 1-14 numeric digits.</td>
<td>add, change, audit, sync, show</td>
<td>[1_14]</td>
<td>GenericDNParser</td>
</tr>
<tr>
<td>TYPE</td>
<td>Id plus type = Foreign key: Policy Profile table. Type of policy.</td>
<td>VARCHAR(7): 1-7 ASCII characters.</td>
<td>show</td>
<td>NXX—NEED DESCRIPTION</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
Policy Percent

The Policy Percent (policy-percent) table distributes traffic based on percent allocation. This type of traffic distribution is used primarily for local 8XX routing and Tandem applications.

Table Name: POLICY_PERCENT
Table Containment Area: EMS, CA, FSAIN

Command Types

add, audit, change, delete, help, show, sync

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

show policy-percent id=texaspercent;
add policy-percent id=texaspercent; begin-range1=1; end-range1=90; policy-type1=tod;
policy-id1=tod001;
change policy-percent id=texaspercent; begin-range2=91; end-range2=100; policy-type1=tod;
policy-id1=tod002;
delete policy-percent id=texaspercent;

Usage Guidelines

Primary Key Token(s): ID

Add Rules: policy-id exists in policy-<policy-type>::id if entered.
Change Rules: policy-id exists in policy-<policy-type>::id if entered.
Delete Rules: id does not exist in any <route-guide, policy-odr, policy-region, policy-tod, policy-prefix, policy-oli, or policy-pop>::policy-id where policy-type = percent.
<table>
<thead>
<tr>
<th><strong>Syntax Description</strong></th>
<th>AUTO_REFRESH</th>
<th>BEGIN_RANGE1</th>
<th>BEGIN_RANGE2</th>
<th>BEGIN_RANGE3</th>
<th>BEGIN_RANGE4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description: Specifies whether to display cached data on the screen.</td>
<td>Description: Specifies whether to display cached data on the screen.</td>
<td>Description: At least one range must be specified. Defines the beginning percent range (beginning and ending percents) for the first destination.</td>
<td>Description: Defines the beginning percent range (beginning and ending percents) for the second destination.</td>
<td>Description: Defines the beginning percent range (beginning and ending percents) for the third destination.</td>
<td>Description: Defines the beginning percent range (beginning and ending percents) for the fourth destination.</td>
</tr>
<tr>
<td>Y—Queries the database for the most current data.</td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Valid for Command: add, change, audit, sync, show</td>
</tr>
<tr>
<td>N—Queries the database for the most current data only if the cached data is unavailable.</td>
<td>Mandatory: add</td>
<td>Mandatory: add</td>
<td>Mandatory: add</td>
<td>Mandatory: add</td>
<td>Mandatory: add</td>
</tr>
<tr>
<td>Valid for Command: show</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default Value: Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible Value: Y, N</td>
<td>Possible Value: [1_100]</td>
<td>Possible Value: [1_100]</td>
<td>Possible Value: [1_100]</td>
<td>Possible Value: [1_100]</td>
<td>Possible Value: [1_100]</td>
</tr>
</tbody>
</table>
### BEGIN_RANGE5

**Description:** Defines the beginning percent range (beginning and ending percents) for the fifth destination.

- **SMALLINT:** 1-100.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** [1_100]
- **Parser:** DecimalParser

### DEFAULT_POLICY_ID

**Description:** ID of a Policy or Route table matching the policy type. Indexes the ID to the type. Assigned by service provider.

- **VARCHAR(16):** 1-16 ASCII characters.
- **Valid for Command:** audit, sync, show
- **Possible Value:** [1_16]
- **Parser:** TextParser

### DEFAULT_POLICY_TYPE

**Description:** Points to the default policy type to use if the next route is not found in the Policy table. Policy routing continues until policy-type=route or policy-nxx is reached. All policy types except Route point to the Policy Type table where type = ctype| odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id is used to index to the Policy or Route table. Some examples are: If policy-type=tod, then the Policy TOD table is indexed with policy-id. If policy-type=route, then the Route table is indexed with policy-id.

- **VARCHAR(7):** 1-7 ASCII characters. Permitted values are:
  - CC—Circuit code based routing.
  - CTYPE—Call type based routing.
  - NXX—Use translated DN.
  - ODR—Origin dependent routing.
  - OLI—Originating line information.
  - POP—Point of presence.
  - PERCENT—Percentage based routing.
  - PREFIX—Prefix-based Routing.
  - REGION—Region based Routing
  - ROUTE—Go to Route table.
  - TOD—Time of day routing.
- **Valid for Command:** audit, sync, show
- **Possible Value:** CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
- **Parser:** TextParser
### DISPLAY
Description: Specifies what token information to display on the screen.
VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
Valid for Command: show
Possible Value: [1_1024]
Parser: TextParser

### END_RANGE1
Description: Defines the end of the percent range (beginning and ending percents) for the first destination.
SMALLINT: 1-100.
Valid for Command: add, change, audit, sync, show
Mandatory: add
Possible Value: [1_100]
Parser: DecimalParser

### END_RANGE2
Description: Defines the end of the percent range (beginning and ending percents) for the second destination.
SMALLINT: 1-100.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_100]
Parser: DecimalParser

### END_RANGE3
Description: Defines the end of the percent range (beginning and ending percents) for the third destination.
SMALLINT: 1-100.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_100]
Parser: DecimalParser

### END_RANGE4
Description: Defines the end of the percent range (beginning and ending percents) for the fourth destination.
SMALLINT: 1-100.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_100]
Parser: DecimalParser

### END_RANGE5
Description: Defines the end of the percent range (beginning and ending percents) for the fifth destination.
SMALLINT: 1-100.
Valid for Command: add, change, audit, sync, show
Possible Value: [1_100]
Parser: DecimalParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Valid for Commands</th>
<th>Default Value</th>
<th>Possible Values</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Description: Primary key. Unique identifier for this policy. Assigned by service provider.</td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td>add, change, show, delete, audit, sync</td>
<td></td>
<td>[1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>LIMIT</td>
<td>Description: Specifies the number of rows to display on the screen.</td>
<td>INTEGER: 1-100000000 (Default = 100000000).</td>
<td>show</td>
<td>Default Value: 100000000</td>
<td>[1_100000000]</td>
<td>DecimalParser</td>
</tr>
<tr>
<td>ORDER</td>
<td>Description: Specifies whether to display data on the screen in a sorted order.</td>
<td>VARCHAR(1024): 1-1024 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.</td>
<td>show</td>
<td>Valid for Command: show</td>
<td>Possible Value: [1_1024]</td>
<td>TextParser</td>
</tr>
<tr>
<td>PLATFORM_STATE</td>
<td>Description: Audits a shared memory database.</td>
<td>VARCHAR(7): 1-7 ASCII characters. Permitted values are: ACTIVE (Default) - System is currently running. STANDBY.</td>
<td>sync, audit</td>
<td>Valid for Command: sync, audit</td>
<td>Default Value: ACTIVE</td>
<td>TextParser</td>
</tr>
<tr>
<td>POLICY_ID1</td>
<td>Description: ID of the Policy or Route table matching the policy type.</td>
<td>VARCHAR(16): 1-16 ASCII characters.</td>
<td>add, change, audit, sync, show</td>
<td>Mandatory: add</td>
<td>Possible Value: [1_16]</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
| POLICY_ID2 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
|---|---|
| POLICY_ID3 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID4 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID5 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
### POLICY_TYPE1

**Description:** Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or Policy-nxx is reached. All policy-types except route point to the Policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.

**Examples:**
- If policy-type=tod, then the policy-tod table is indexed with policy-id.
- If policy-type=route, then the route table is indexed with policy-id.

**VARCHAR(7):** 1-7 ASCII characters. Permitted values are:
- CC—Circuit Code based routing.
- CTYPE—Call Type based routing.
- NXX—Use translated DN.
- ODR—Origin Dependent Routing.
- OLI—Originating line information.
- PERCENT—Percentage based routing.
- POP—Point of presence.
- PREFIX—Prefix-based routing.
- REGION—Region-based routing.
- ROUTE—Go to Route table.
- TOD—Time-of-day routing.

Valid for Command: add, change, audit, sync, show

Mandatory: add

Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION

Parser: TextParser

### POLICY_TYPE2

**Description:** See policy-type1.

**VARCHAR(7):** 1-7 ASCII characters.

Valid for Command: add, change, audit, sync, show

Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION

Parser: TextParser

### POLICY_TYPE3

**Description:** See policy-type1.

**VARCHAR(7):** 1-7 ASCII characters.

Valid for Command: add, change, audit, sync, show

Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION

Parser: TextParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Validation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLICY_TYPE4</td>
<td>Description: See policy-type1.</td>
<td>VARCHAR(7): 1-7 ASCII characters.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
</tr>
<tr>
<td>POLICY_TYPE5</td>
<td>Description: See policy-type1.</td>
<td>VARCHAR(7): 1-7 ASCII characters.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
<td></td>
</tr>
<tr>
<td>START_ROW</td>
<td>Description: Specifies to begin displaying data on the screen at a specific row.</td>
<td>INTEGER: 1-100000000 (Default = 1).</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
<td>Default Value: 1</td>
</tr>
<tr>
<td></td>
<td>Mandatory: sync</td>
<td>Possible Value: [1_100000000]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
<td></td>
</tr>
<tr>
<td>TARGET</td>
<td>Description: Specifies the network element to receive the request.</td>
<td>VARCHAR(5): 1-5 ASCII characters. Permitted values are:</td>
</tr>
<tr>
<td></td>
<td>CA—Network identifier of a Call Agent.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FSPTC (POTS/Tandem/Centrex Feature Server)</td>
<td>Network identifier of a specific Feature Server.</td>
</tr>
<tr>
<td></td>
<td>FSAIN (AIN Feature Server)</td>
<td>Network identifier of AIN Feature Servers.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: sync</td>
<td>Mandatory: sync</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_10]</td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td>TYPE</td>
<td>Description: Id plus type = Foreign key: Policy Profile table. Type of policy.</td>
<td>VARCHAR(7): 1-7 ASCII characters. Permitted value is:</td>
</tr>
<tr>
<td></td>
<td>NXX—NEED DESCRIPTION</td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td>Possible Value: NXX</td>
<td>Parser: TextParser</td>
</tr>
</tbody>
</table>
Policy Point of Presence

The Policy Point of Presence enables the flexible routing of calls via the BTS 10200 based on the point of presence (POP). The POP based policy routing routes a call to the nearest trunk group when there are multiple trunk groups. There are several situations where a policy POP can be used. If a Call Agent serves several POPs, each POP can have its own announcement server. A POP-specific announcement server can be more efficient than a centralized announcement server. InterLATA carriers also have a point of presence in each POP. Route interLATA or international calls to the nearest carrier location using policy POP routing.

Table Name: POLICY_POP
Table Containment Area: EMS, CA, FSAIN

Command Types

- add, audit, change, delete, help, show, sync

**Caution**
The `sync` command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

```
show policy-pop id=car9999; pop-id=dallaspop;
add policy-pop id=car9999; pop-id=dallaspop; policy-type=tod; policy-id=tod101;
change policy-pop id=car9999; pop-id=dallaspop; policy-type=oli; policy-id=tod101;
delete policy-pop id=car9999;
```

Usage Guidelines

**Primary Key Token(s):** ID, POP_ID

**Add Rules:** policy-id exists in policy-<policy-type>::id if entered.

**Change Rules:** policy-id exists in policy-<policy-type>::id if entered.

**Delete Rules:** id does not exist in any <route-guide, policy-odr, policy-region, policy-percent, policy-tod, policy-prefix, or policy-oli>::policy-id where policy-type = pop.

Syntax Description
### AUTO_REFRESH
- **Description:** Specifies whether to display cached data on the screen.
- **CHAR(1): Y/N (Default = Y).**
  - Y—Queries the database for the most current data.
  - N—Queries the database for the most current data only if the cached data is unavailable.
- **Valid for Command:** show
- **Default Value:** Y
- **Possible Value:** Y, N
- **Parser:** BooleanParser

### DISPLAY
- **Description:** Specifies what token information to display on the screen.
- **VARCHAR(1024): 1-1024 (Default = all tokens are displayed).** Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
- **Valid for Command:** show
- **Possible Value:** [1_1024]
- **Parser:** TextParser

### ID
- **Description:** Primary key. Policy POP identifier.
- **VARCHAR(16): 1-16 ASCII characters.**
- **Valid for Command:** add, change, show, delete, audit, sync
- **Mandatory:** add, change, delete
- **Possible Value:** [1_16]
- **Parser:** TextParser

### LIMIT
- **Description:** Specifies the number of rows to display on the screen.
- **INTEGER: 1-100000000 (Default = 100000000).**
- **Valid for Command:** show
- **Default Value:** 100000000
- **Possible Value:** [1_100000000]
- **Parser:** DecimalParser

### MASTER
- **Valid for Command:** sync
- **Mandatory:** sync
- **Possible Value:** [1_10]
- **Parser:** TextParser

### ORDER
- **Description:** Specifies whether to display data on the screen in a sorted order.
- **VARCHAR(1024): 1-1024 (Default = all rows are displayed).** Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
- **Valid for Command:** show
- **Possible Value:** [1_1024]
- **Parser:** TextParser
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Type</th>
<th>Permitted Values</th>
<th>Valid for Command</th>
<th>Mandatory</th>
<th>Possible Value</th>
<th>Parser</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLATFORM_STATE</td>
<td>Audits a shared memory database.</td>
<td>VARCHAR(7)</td>
<td>1-7 ASCII characters. Permitted values are: ACTIVE (Default) - System is currently running. STANDBY. Valid for Command: sync, audit</td>
<td>Default Value: ACTIVE</td>
<td>TRUE</td>
<td>Possible Value: ACTIVE, STANDBY</td>
<td>TextParser</td>
</tr>
<tr>
<td>POLICY_ID</td>
<td>ID of the Policy or Route table that matches the next policy type. Indexes the ID to the type.</td>
<td>VARCHAR (16)</td>
<td>1-16 ASCII characters.</td>
<td>Valid for Command: add, change, audit, sync, show</td>
<td>TRUE</td>
<td>Possible Value: [1_16]</td>
<td>TextParser</td>
</tr>
<tr>
<td>POLICY_TYPE</td>
<td>Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the policy-$type table where $type = odr</td>
<td>VARCHAR(7)</td>
<td>ODR—Origin dependent routing. TOD—Time of day routing. PERCENT—Percent allocation. PREFIX—Prefix-based routing. OLI—Originating line information. ROUTE—To Route table. NXX—Use translated DN. REGION—Region-based routing. Valid for Command: add, change, audit, sync, show</td>
<td>Mandatory: add</td>
<td>TRUE</td>
<td>Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, ROUTE, NXX, REGION, POP</td>
<td>TextParser</td>
</tr>
</tbody>
</table>
| **POP_ID** | Description: Primary key. Foreign key: Point of Presence table. The pop-id assigned to the subscriber profile or the incoming trunk group to be used.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, show, delete, audit, sync  
Mandatory: add, change, delete  
Possible Value: [1_16]  
Parser: TextParser |
| **START_ROW** | Description: Specifies to begin displaying data on the screen at a specific row.  
INTEGER: 1-100000000 (Default = 1).  
Valid for Command: show  
Default Value: 1  
Possible Value: [1_100000000]  
Parser: DecimalParser |
| **TARGET** | Description: Specifies the network element to receive the request.  
VARCHAR(5): 1-5 ASCII characters. Permitted values are:  
CA—Network identifier of a Call Agent.  
FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.  
FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.  
Valid for Command: sync  
Mandatory: sync  
Possible Value: [1_10]  
Parser: TextParser |
| **TYPE** | Description: Id plus type = Foreign key: Policy Profile table. Type of policy.  
VARCHAR(7): 1-7 ASCII characters. Permitted value is:  
NXX—NEED DESCRIPTION  
Valid for Command: show  
Possible Value: NXX  
Parser: TextParser |
Policy Prefix

The Policy Prefix enables the flexible routing of calls via the BTS 10200 based on prefix (type of call). Typical call types include 1+ dialing, international calls, toll-free, and so on. The Policy Prefix is used mainly for carrier routing.

Table Name: POLICY_PREFIX
Table Containment Area: EMS, CA, FSAIN

Command Types

| add, audit, change, delete, help, show, sync |

Caution

The `sync` command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

```plaintext
show policy-prefix id=standard;
add policy-prefix id=standard; prefix1=national; policy-type1=tod; policy-id1=tod01;
change policy-prefix id=standard; prefix2=da; policy-type=tod; policy-id=tod99;
delete policy-prefix id=standard;
```

Usage Guidelines

Primary Key Token(s): ID

Foreign Key Token(s): policy-type plus policy-id

Add Rules: policy-id exists in policy-<policy-type>::id if entered.

Change Rules: policy-id exists in policy-<policy-type>::id if entered.

Delete Rules: id does not exist in any <route-guide, policy-odr, policy-region, policy-percent, policy-tod, policy-oli, or policy-pop>::policy-id where policy-type = prefix.

Syntax Description
### AUTO_REFRESH

**Description:** Specifies whether to display cached data on the screen.

**CHAR(1):** Y/N (Default = Y).

Y—Queries the database for the most current data.

N—Queries the database for the most current data only if the cached data is unavailable.

Valid for Command: show

Default Value: Y

Possible Value: Y, N

Parser: BooleanParser

### DEFAULT_POLICY_ID

**Description:** Assigned by service provider.

**VARCHAR(16):** 1-16 ASCII characters.

Valid for Command: audit, sync, show

Possible Value: [1_16]

Parser: TextParser

### DEFAULT_POLICY_TYPE

**Description:** Points to the default policy type to use if the next route is not found in the Policy table. Policy routing continues until policy-type=route or policy-nxx is reached. All policy types except Route point to the Policy Type table where type = ctype| odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id is used to index to the Policy or Route table. Some examples are: If policy-type=tod, then the Policy TOD table is indexed with policy-id. If policy-type=route, then the Route table is indexed with policy-id.

**VARCHAR(7):** 1-7 ASCII characters. Permitted values are:

- CC—Circuit code based routing.
- CTYPE—Call type based routing.
- NXX—Use translated DN.
- ODR—Origin dependent routing.
- OLI—Originating line information.
- POP—Point of presence.
- PERCENT—Percentage based routing.
- PREFIX—Prefix-based Routing.
- REGION—Region based Routing.
- ROUTE—Go to Route table.
- TOD—Time of day routing.

Valid for Command: audit, sync, show

Possible Value: CC, CTYPE, TOD, PERCENT, PREFIX, OLI, ROUTE, NXX, ODR, POP, REGION

Parser: TextParser
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Type</th>
<th>Parameters</th>
<th>Valid for Command</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DISPLAY</strong></td>
<td>Specifies what token information to display on the screen.</td>
<td>VARCHAR(1024)</td>
<td>1-1024 (Default = all tokens are displayed).</td>
<td>Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
<td></td>
<td>Possible Value: [1_1024]</td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td><strong>ID</strong></td>
<td>Primary key. Unique identifier for this policy prefix.</td>
<td>VARCHAR(16)</td>
<td>1-16 ASCII characters.</td>
<td>Valid for Command: add, change, show, delete, audit, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add, change, delete</td>
<td></td>
<td>Possible Value: [1_16]</td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td><strong>LIMIT</strong></td>
<td>Specifies the number of rows to display on the screen. Valid only for the show command.</td>
<td>INTEGER</td>
<td>1-100000000 (Default = 100000000).</td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td>Default Value: 100000000</td>
<td></td>
<td>Possible Value: [1_100000000]</td>
<td>Parser: DecimalParser</td>
</tr>
<tr>
<td><strong>MASTER</strong></td>
<td>Valid for Command: sync</td>
<td></td>
<td>Mandatory: sync</td>
<td>Possible Value: [1_10]</td>
</tr>
<tr>
<td><strong>ORDER</strong></td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
<td>VARCHAR(1024)</td>
<td>1-1024 (Default = all rows are displayed).</td>
<td>Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
<td></td>
<td>Possible Value: [1_1024]</td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td><strong>PLATFORM_STATE</strong></td>
<td>Audits a shared memory database.</td>
<td>VARCHAR(7)</td>
<td>1-7 ASCII characters.</td>
<td>Permitted values are: ACTIVE (Default) - System is currently running. STANDBY.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: sync, audit</td>
<td></td>
<td>Default Value: ACTIVE</td>
<td>Possible Value: ACTIVE, STANDBY</td>
</tr>
</tbody>
</table>
| POLICY_ID1 | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Mandatory: add  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID10 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID2 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID3 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID4 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID5 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID6 | Description: See policy-id1.  
| VARCHAR(16): 1-16 ASCII characters.  
| Valid for Command: add, change, audit, sync, show  
| Possible Value: [1_16]  
| Parser: TextParser |
| POLICY_ID7 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
|------------|--------------------------------------------------------------------------------------------------|
| POLICY_ID8 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
| POLICY_ID9 | Description: See policy-id1.  
VARCHAR(16): 1-16 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: [1_16]  
Parser: TextParser |
**POLICY_TYPE1**  
Description: Foreign key: Policy-type n plus the policy-idnto the Policy Profile table. Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the Policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be.  
Examples:  
If policy-type=tod, then the Policy-tod table is indexed with policy-id.  
If policy-type=route, then Route table is indexed with policy-id.  
VARCHAR(7): 1-7 ASCII characters. Permitted values are:  
CC—Circuit Code based routing.  
CTYPE—Call Type based routing.  
NXX—Use translated DN.  
ODR—Origin Dependent Routing.  
OLI—Originating line information.  
PERCENT—Percentage based routing  
POP—Point of presence.  
PREFIX—Prefix-based routing.  
REGION—Region-based routing.  
ROUTE—Go to Route table.  
TOD—Time-of-day routing.  
Valid for Command: add, change, audit, sync, show  
Mandatory: add  
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
Parser: TextParser  

**POLICY_TYPE10**  
Description: See policy-type1.  
VARCHAR(7): 1-7 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
Parser: TextParser  

**POLICY_TYPE2**  
Description: See policy-type1.  
VARCHAR(7): 1-7 ASCII characters.  
Valid for Command: add, change, audit, sync, show  
Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
Parser: TextParser
| POLICY_TYPE3 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
| POLICY_TYPE4 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
| POLICY_TYPE5 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
| POLICY_TYPE6 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
| POLICY_TYPE7 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
| POLICY_TYPE8 | Description: See policy-type1.  
|             | VARCHAR(7): 1-7 ASCII characters.  
|             | Valid for Command: add, change, audit, sync, show  
|             | Possible Value: CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION  
|             | Parser: TextParser |
### POLICY_TYPE9

Description: See policy-type1.

- **VARCHAR(7):** 1-7 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** CC, CTYPE, ODR, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, REGION
- **Parser:** TextParser

### PREFIX1

Description: Type of call being provisioned.

- **VARCHAR(10):** 1-10 ASCII characters. Permitted values are:
  - NATIONAL—National call (1+)
  - INTL—International call (011+)
  - OPERATOR—Operator call (0-, 00)
  - NAT-OPR—National operator call (0+ call)
  - INTL-OPR—International operator call (01+ call)
  - TOLL-FREE—Toll free call (8XX)
  - CUT-THRU—Cut-through call (101XXXX++)
  - DA—Directory assistance call
- **Valid for Command:** add, change, audit, sync, show
- **Mandatory:** add
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX10

Description: See prefix1.

- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX2

Description: See prefix1.

- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX3

Description: See prefix1.

- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser
### PREFIX4
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX5
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX6
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX7
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX8
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser

### PREFIX9
- **Description:** See prefix1.
- **VARCHAR(10):** 1-10 ASCII characters.
- **Valid for Command:** add, change, audit, sync, show
- **Possible Value:** NATIONAL, INTL, OPERATOR, NAT_OPR, INTL_OPR, TOLL_FREE, CUT_THRU, DA
- **Parser:** TextParser
| **START_ROW** | Description: Specifies to begin displaying data on the screen at a specific row.  
INTEGER: 1-100000000 (Default = 1).  
Valid for Command: show  
Default Value: 1  
Possible Value: [1_100000000]  
Parser: DecimalParser |
| **TARGET** | Description: Specifies the network element to receive the request.  
VARCHAR(5): 1-5 ASCII characters. Permitted values are:  
CA—Network identifier of a Call Agent.  
FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.  
FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.  
Valid for Command: sync  
Mandatory: sync  
Possible Value: [1_10]  
Parser: TextParser |
| **TYPE** | Description: Id plus type = Foreign key: Policy Profile table. Type of policy.  
VARCHAR(7): 1-7 ASCII characters. Permitted value is:  
NXX—NEED DESCRIPTION  
Valid for Command: show  
Possible Value: NXX  
Parser: TextParser |
Region Profile

The Region Profile (region-profile) table groups North American Numbering Plan (NANP) digits to an originating region. There can be many ID and digit-string combinations for a given region. In this conceptual relationship, a number of digit patterns (digit-string) can belong to a given region and a number of originating regions comprise a region profile (id). Use the value specified in the ca-config record as the default region where type=default-region.

Table Name: REGION_PROFILE
Table Containment Area: EMS, CA, FSAIN

Command Types

add, audit, change, delete, help, show, sync

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

show region-profile id=e911; digit-string=210-470;
add region-profile id=e911; digit-string=210-470; region=sanantonio;
change region-profile id=e911; digit-string=210-470; region=sanantonio;
delete region-profile id=e911; digit-string=210-470;

Syntax Description

<table>
<thead>
<tr>
<th>AUTO_REFRESH</th>
<th>Description: Specifies whether to display cached data on the screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAR(1): Y/N (Default = Y).</td>
<td>Y—Queries the database for the most current data.</td>
</tr>
<tr>
<td></td>
<td>N—Queries the database for the most current data only if the cached data is unavailable.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td>Default Value: Y</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
</tr>
<tr>
<td></td>
<td>Parser: BooleanParser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIGIT_STRING</th>
<th>Description: Primary key. NDC-EC-XXXX to be assigned to a region.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VARCHAR(14): 1-14 numeric characters.</td>
<td>Valid for Command: add, change, show, delete, audit, sync</td>
</tr>
<tr>
<td>Mandatory: add, change, delete</td>
<td></td>
</tr>
<tr>
<td>Possible Value: [1_14]</td>
<td></td>
</tr>
<tr>
<td>Parser: GenericDNParser</td>
<td></td>
</tr>
<tr>
<td>Attribute</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>DISPLAY</strong></td>
<td>Specifies what token information to display on the screen.</td>
</tr>
<tr>
<td><strong>ID</strong></td>
<td>Primary key. Region profile ID.</td>
</tr>
<tr>
<td><strong>LIMIT</strong></td>
<td>Specifies the number of rows to display on the screen.</td>
</tr>
<tr>
<td><strong>MASTER</strong></td>
<td>Valid for Command: sync Mandatory: sync Possible Value: [1_10] Parser: TextParser</td>
</tr>
<tr>
<td><strong>ORDER</strong></td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
</tr>
<tr>
<td><strong>PLATFORM_STATE</strong></td>
<td>Audits a shared memory database.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>REGION</td>
<td>Region assigned to the calling party number.</td>
</tr>
<tr>
<td>START_ROW</td>
<td>Specifies to begin displaying data on the screen at a specific row.</td>
</tr>
<tr>
<td>TARGET</td>
<td>Specifies the network element to receive the request.</td>
</tr>
<tr>
<td></td>
<td>CA—Network identifier of a Call Agent.</td>
</tr>
<tr>
<td></td>
<td>FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.</td>
</tr>
<tr>
<td></td>
<td>FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.</td>
</tr>
</tbody>
</table>
Policy Region

The Policy Region enables the flexible routing of calls via the BTS 10200 based on the call region. The region is derived using the Region Profile table from the Route Guide table and the calling party number ANI. If ANI is not available or the Region Profile table is not provisioned, the region assigned to the trunk group is used for trunk origination. If a record cannot be found based on the region, the record with region=default (if provisioned) is used for routing.

Table Name: POLICY_REGION
Table Containment Area: EMS, CA, FSAIN

Command Types

add, audit, change, delete, help, show, sync

Caution

The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt the database and disrupt call processing. Use with caution.

Examples

show policy-region id=ca200; region=sanantonio;
add policy-region id=ca200; region=sanantonio; policy-type=tod; policy-id=tod101;
change policy-region id=ca200; region=sanantonio; policy-type=tod; policy-id=tod102;
delete policy-region id=ca200; region=sanantonio;

Usage Guidelines

Primary Key Token(s): ID, REGION

Foreign Key Token(s): policy-type{n} plus policy-id{n}

Add Rules: region-profile id must exist; policy-id exists in policy-<policy-type>::id if entered.
Change Rules: id must exist; policy-id exists in policy-<policy-type>::id if entered.
Delete Rules: id does not exist in any <route-guide, policy-odr, policy-percent, policy-tod, policy-prefix, policy-oli, or policy-pop>::policy-id where policy-type = region.
### Syntax Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUTO_REFRESH</strong></td>
<td>Specifies whether to display cached data on the screen.</td>
</tr>
<tr>
<td></td>
<td><strong>CHAR(1):</strong> Y/N (Default = Y).</td>
</tr>
<tr>
<td></td>
<td>Y—Queries the database for the most current data.</td>
</tr>
<tr>
<td></td>
<td>N—Queries the database for the most current data only if the cached data is</td>
</tr>
<tr>
<td></td>
<td>unavailable.</td>
</tr>
<tr>
<td></td>
<td><strong>Valid for Command:</strong> show</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> Y</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> Y, N</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> BooleanParser</td>
</tr>
<tr>
<td><strong>DISPLAY</strong></td>
<td>Specifies what token information to display on the screen.</td>
</tr>
<tr>
<td></td>
<td><strong>VARCHAR(1024):</strong> 1-1024 (Default = all tokens are displayed). Permitted</td>
</tr>
<tr>
<td></td>
<td>values are any valid token that can be shown for this command. Multiple</td>
</tr>
<tr>
<td></td>
<td>tokens can be entered by separating with a comma.</td>
</tr>
<tr>
<td></td>
<td><strong>Valid for Command:</strong> show</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> [1_1024]</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> TextParser</td>
</tr>
<tr>
<td><strong>ID</strong></td>
<td>Primary key. Identifier of the policy region.</td>
</tr>
<tr>
<td></td>
<td><strong>VARCHAR(16):</strong> 1-16 ASCII characters.</td>
</tr>
<tr>
<td></td>
<td><strong>Valid for Command:</strong> add, change, show, delete, audit, sync</td>
</tr>
<tr>
<td></td>
<td><strong>Mandatory:</strong> add, change, delete</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> [1_16]</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> TextParser</td>
</tr>
<tr>
<td><strong>LIMIT</strong></td>
<td>Specifies the number of rows to display on the screen.</td>
</tr>
<tr>
<td></td>
<td><strong>INTEGER: 1-100000000 (Default = 100000000).</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Valid for Command:</strong> show</td>
</tr>
<tr>
<td></td>
<td><strong>Default Value:</strong> 100000000</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> [1_100000000]</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> DecimalParser</td>
</tr>
<tr>
<td><strong>MASTER</strong></td>
<td>Valid for Command: sync</td>
</tr>
<tr>
<td></td>
<td><strong>Mandatory:</strong> sync</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> [1_10]</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> TextParser</td>
</tr>
<tr>
<td><strong>ORDER</strong></td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
</tr>
<tr>
<td></td>
<td><strong>VARCHAR(1024):</strong> 1-1024 (Default = all rows are displayed). Permitted</td>
</tr>
<tr>
<td></td>
<td>values are any valid token that can be shown for this command. Multiple</td>
</tr>
<tr>
<td></td>
<td>tokens can be entered by separating with a comma.</td>
</tr>
<tr>
<td></td>
<td><strong>Valid for Command:</strong> show</td>
</tr>
<tr>
<td></td>
<td><strong>Possible Value:</strong> [1_1024]</td>
</tr>
<tr>
<td></td>
<td><strong>Parser:</strong> TextParser</td>
</tr>
</tbody>
</table>
| **PLATFORM_STATE** | Description: Audits a shared memory database. 
VARCHAR(7): 1-7 ASCII characters. Permitted values are:
ACTIVE (Default) - System is currently running.
STANDBY.
Valid for Command: sync, audit
Default Value: ACTIVE
Possible Value: ACTIVE, STANDBY
Parser: TextParser |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------|
| **POLICY_ID**     | Description: ID of the Policy or Route table that matches the policy type. Indexes the ID to the type.
VARCHAR(16): 1-16 ASCII characters.
Valid for Command: add, change, audit, sync, show
Mandatory: add
Possible Value: [1_16]
Parser: TextParser |
### POLICY_TYPE

| POLICY_TYPE | Description: Foreign key: Policy-type n plus the policy-id n to the Policy Profile table. Points to the next policy type table to be used in the sequence. Policy routing continues until policy-type=route or policy-nxx is reached. All policy-types except route point to the Policy-$type table where $type = odr | tod | percent | prefix | oli | pop | nxx. If policy-type = route, the Route table is used for routing. The policy-id indexes the Policy or Route table, whatever the case may be. | Examples: If policy-type=tod, then the Policy TOD table is indexed with the policy-id. If policy-type=route, then the Route table is indexed with the policy-id. VARCHAR(7): 1-7 ASCII characters. Permitted values are: CC—Circuit Code based routing. CTYPE—Call Type based routing. NXX—Use translated DN. ODR—Origin Dependent Routing. OLI—Originating line information. PERCENT—Percentage based routing POP—Point of presence. PREFIX—Prefix-based routing. REGION—Region-based routing. ROUTE—Go to Route table. TOD—Time-of-day routing. Valid for Command: add, change, audit, sync, show Mandatory: add Possible Value: CC, CTYPE, TOD, PERCENT, PREFIX, OLI, POP, ROUTE, NXX, ODR, REGION Parser: TextParser |
CHAPTER 2      Routing

Policy Based Flexible Routing

REGION

Description: Primary key. Region is derived from the Region Profile table based on the ANI. If the region cannot be derived from the region-profile, use the region assigned to the incoming trunk group. If a region is not available, use the default region to route the call.

VARCHAR(16): 1-16 ASCII characters.

The character string default defines the default route for the specified ID. If a record based on the region based on the calling party number or incoming trunk group is not found, the Call Agent searches for the default record.

Valid for Command: add, change, show, delete, audit, sync

Mandatory: add, change, delete

Possible Value: [1_16]

Parser: TextParser

START_ROW

Description: Specifies to begin displaying data on the screen at a specific row.

INTEGER: 1-100000000 (Default = 1).

Valid for Command: show

Default Value: 1

Possible Value: [1_100000000]

Parser: DecimalParser

TARGET

Description: Specifies the network element to receive the request.

VARCHAR(5): 1-5 ASCII characters. Permitted values are:

CA—Network identifier of a Call Agent.

FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.

FSAIN (AIN Feature Server)—Network identifier of AIN Feature Servers.

Valid for Command: sync

Mandatory: sync

Possible Value: [1_10]

Parser: TextParser

TYPE

Description: Id plus type = Foreign key: Policy Profile table. Type of policy.

VARCHAR(7): 1–7 ASCII characters. Permitted value is:

NXX—NEED DESCRIPTION

Valid for Command: show

Possible Value: NXX

Parser: TextParser
Policy Call Type

The Policy Call Type (policy-call-type) table defines a route based on the call type.

Table Name: POLICY-CALL-TYPE
Table Containment Area: EMS, CA

Command Types

add, audit, change, delete, help, show, sync

Caution

The `sync` command is a restricted command and is intended for repairing data only. Improper use may corrupt database and disrupt call processing. Use with caution.

Usage Guidelines

Primary Key Token(s): id; ctype

Syntax Description

AUTO_REFRESH
Description: Specifies whether to display cached data on the screen.
CHAR(1): Y/N (Default = Y).
Y—Queries the database for the most current data.
N—Queries the database for the most current data only if the cached data is unavailable.
Valid for Command: show
Default Value: Y
Possible Value: Y, N
Parser: BooleanParser

CALL_TYPE
Valid for Command: add, audit, change, delete, show, sync
Mandatory: add, change, delete
Possible Value: [1_16]
Parser: TextNoCaseParser

DISPLAY
Description: Specifies what token information to display on the screen.
VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
Valid for Command: show
Possible Value: [1_1024]
Parser: TextParser

ID
Valid for Command: add, audit, change, delete, show, sync
Mandatory: add, change, delete
Possible Value: [1_16]
Parser: TextParser
### LIMIT
Description: Specifies the number of rows to display on the screen.
INTEGER: 1-100000000 (Default = 100000000).
Valid for Command: show
Default Value: 100000000
Possible Value: [1_100000000]
Parser: DecimalParser

### MASTER
Valid for Command: sync
Possible Value: [1_10]
Parser: TextParser

### ORDER
Description: Specifies whether to display data on the screen in a sorted order.
VARCHAR(51200): 1-51200 (Default = all rows are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.
Valid for Command: show
Possible Value: [1_1024]
Parser: TextParser

### POLICY_ID
Valid for Command: add, audit, change, show, sync
Mandatory: add
Possible Value: [1_16]
Parser: TextParser

### POLICY_TYPE
Valid for Command: add, audit, change, show, sync
Mandatory: add
Possible Value: CC, NXX, ODR, OLI, POP, PERCENT, PREFIX, REGION, ROUTE, TOD
Parser: TextParser
<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>START_ROW</td>
<td>Specifies to begin displaying data on the screen at a row. INTEGER: 1-100000000 (Default = 1). Valid for Command: show Default Value: 1 Possible Value: [1_100000000] Parser: DecimalParser</td>
</tr>
<tr>
<td>TARGET</td>
<td>Specifies the network element to receive the request. VARCHAR(5): 1-5 ASCII characters. Permitted values are: CA—Network identifier of a CA. FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server. FSAIN (AIN Feature Server)—Network identifier of AIN FSs. Valid for Command: sync Possible Value: [1_10] Parser: TextParser</td>
</tr>
</tbody>
</table>
# Policy Circuit Code

The Policy Circuit Code (policy-circuit-code) table defines a route based on the Circuit Code received in the TNS parameter.

**Table Name:** POLICY-CIRCUIT-CODE  
**Table Containment Area:** Call Agent

## Command Types

<table>
<thead>
<tr>
<th>Command Types</th>
<th>add, audit, change, delete, help, show, sync</th>
</tr>
</thead>
</table>

**Caution**  
The `sync` command is a restricted command and is intended for repairing data only. Improper use may corrupt database and disrupt call processing. Use with caution.

## Usage Guidelines

Primary Key Token(s): id; cc

## Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description: Specifies whether to display cached data on the screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTO_REFRESH</td>
<td>CHAR(1): Y/N (Default = Y).</td>
</tr>
<tr>
<td></td>
<td>Y—Queries the database for the most current data.</td>
</tr>
<tr>
<td></td>
<td>N—Queries the database for the most current data only if the cached data is unavailable.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td>Default Value: Y</td>
</tr>
<tr>
<td></td>
<td>Possible Value: Y, N</td>
</tr>
<tr>
<td></td>
<td>Parser: BooleanParser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description: Specifies what token information to display on the screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC</td>
<td>Valid for Command: add, audit, change, delete, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add, change, delete</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [0_15]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description: Specifies what token information to display on the screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPLAY</td>
<td>VARCHAR(1024): 1-1024 (Default = all tokens are displayed). Permitted values are any valid token that can be shown for this command. Multiple tokens can be entered by separating with a comma.</td>
</tr>
<tr>
<td></td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_1024]</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description: Specifies what token information to display on the screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Valid for Command: add, audit, change, delete, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add, change, delete</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_16]</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>LIMIT</td>
<td>Specifies the number of rows to display on the screen.</td>
</tr>
<tr>
<td>ORDER</td>
<td>Specifies whether to display data on the screen in a sorted order.</td>
</tr>
<tr>
<td>POLICY_ID</td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td>POLICY_TYPE</td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td>START_ROW</td>
<td>Specifies to begin displaying data on the screen at a row.</td>
</tr>
<tr>
<td>TYPE</td>
<td>Valid for Command: show</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Policy Server

The Policy Server (policy-server) table defines a route based on the Circuit Code received in the TNS parameter.

Table Name: AGGR
Table Containment Area: Call Agent, EMS

Command Types
add, audit, change, control, delete, help, reset, show, status, sync

Caution
The sync command is a restricted command and is intended for repairing data only. Improper use may corrupt database and disrupt call processing. Use with caution.

Examples
show policy-server id=er1;
add policy-server id=er1; tsap-addr=190.101.100.123;
change policy-server id=er1; dqos-supp=y;
delete policy-server id=er1;

Usage Guidelines
Primary Key: ID
Foreign Key: (AGGR_PROFILE_ID) references AGGR_PROFILE (ID)
Add Rules: es-event-supp=y only if es-supp=y;
Change Rules: No change allowed on tsap-addr, es-event-supp=y only if es-supp=y;
Delete Rules: policy-server-id cannot exist in POP table.

Syntax Description
<table>
<thead>
<tr>
<th>AGGR_PROFILE_ID</th>
<th>Valid for Command: add, audit, change, show, sync</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Value</td>
<td>[1_16]</td>
</tr>
<tr>
<td>Parser</td>
<td>TextParser</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td>Possible Value</td>
<td>[1_64]</td>
</tr>
<tr>
<td>Parser</td>
<td>TextParser</td>
</tr>
<tr>
<td>ID</td>
<td>Valid for Command: add, audit, change, delete, show, status, sync, control, reset</td>
</tr>
<tr>
<td>Mandatory</td>
<td>add, change, delete, status, control, reset</td>
</tr>
<tr>
<td>Possible Value</td>
<td>[1_16]</td>
</tr>
<tr>
<td>Parser</td>
<td>TextParser</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>IKE_CS</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: 3DES-MD5, 3DES-SHA1</td>
</tr>
<tr>
<td></td>
<td>Possible Value: 3DES-MD5, 3DES-SHA1</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser.toUpperCase().trim()</td>
</tr>
<tr>
<td><strong>IKE_GROUP</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: 2</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_2]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
</tr>
<tr>
<td><strong>IKE_KEY</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [1_256]</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
</tr>
<tr>
<td><strong>IKE_SA_LIFETIME</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: 86400</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [0_2147483647]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
</tr>
<tr>
<td><strong>IPSEC_SA_ESP_CS</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: 3DES-MD5, 3DES-SHA1, NULL-MD5, NULL-SHA1</td>
</tr>
<tr>
<td></td>
<td>Possible Value: 3DES-MD5, 3DES-SHA1, NULL-MD5, NULL-SHA1</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser.toUpperCase().trim()</td>
</tr>
<tr>
<td><strong>IPSEC_SA_GRACE_PERIOD</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Default Value: 21600</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [0_536870911]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
</tr>
<tr>
<td><strong>IPSEC_SA_LIFETIME</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: 86400</td>
</tr>
<tr>
<td></td>
<td>Possible Value: [0_2147483647]</td>
</tr>
<tr>
<td></td>
<td>Parser: DecimalParser</td>
</tr>
<tr>
<td><strong>IPSEC_ULP_NAME</strong></td>
<td>Valid for Command: add, audit, change, show, sync</td>
</tr>
<tr>
<td></td>
<td>Mandatory: add</td>
</tr>
<tr>
<td></td>
<td>Default Value: IP</td>
</tr>
<tr>
<td></td>
<td>Possible Value: IP, UDP, TCP</td>
</tr>
<tr>
<td></td>
<td>Parser: TextParser</td>
</tr>
</tbody>
</table>
Chapter 2      Routing

Policy Based Flexible Routing

| MASTER         | Valid for Command: sync
|                | Mandatory: sync
|                | Possible Value: [1_10]
|                | Parser: TextParser

| MODE           | Valid for Command: control
|                | Mandatory: control
|                | Possible Value: FORCED, GRACEFUL
|                | Parser: TextParser

| PLATFORM_STATE | Description: Audits a shared memory database.
|               | VARCHAR(7): 1-7 ASCII characters. Permitted values are:
|               | ACTIVE (Default) - System is currently running.
|               | STANDBY.
|                | Valid for Command: sync, audit
|                | Default Value: ACTIVE
|                | Possible Value: ACTIVE, STANDBY
|                | Parser: TextParser

| STATUS         | Valid for Command: audit, sync, show
|                | Default Value: OOS
|                | Possible Value: OOS, INS
|                | Parser: TextParser

| TARGET         | Description: Specifies the network element to receive the request.
|               | VARCHAR(5): 1-5 ASCII characters. Permitted values are:
|               | CA—Network identifier of a CA.
|               | FSPTC (POTS/Tandem/Centrex Feature Server)—Network identifier of a specific Feature Server.
|               | FSAIN (AIN Feature Server)—Network identifier of AIN FSs.
|                | Valid for Command: sync
|                | Mandatory: sync
|                | Possible Value: [1_10]
|                | Parser: TextParser

| TARGET_STATE   | Description: State of CA or FS.
|               | VARCHAR(7): 1-7 ASCII characters. Permitted values are:
|               | ACTIVE (Default) - System is currently running.
|               | STANDBY.
|                | Valid for Command: control
|                | Mandatory: control
|                | Possible Value: INS, OOS
|                | Parser: TextParser
### TSAP_ADDR
- **Valid for Command:** add, audit, change, show, sync
- **Mandatory:** add
- **Possible Value:** [1_64]
- **Parser:** DomainParser

### TYPE
- **Valid for Command:** audit, show, sync
- **Default Value:** POLICY_SERVER
- **Possible Value:** POLICY_SERVER
- **Parser:** TextParser

### WAIT
- **Description:** Stops status, control, or equip commands from executing until pending provisioning commands complete.
- **CHAR(1): Y/N (Default = N).**
  - Y - Checks for pending provisioning requests; allows provisioning commands to execute first.
  - N - Does not check for pending provisioning requests; commands execute according to their order.
- **Valid for Command:** status
- **Mandatory:** status
- **Default Value:** N
- **Possible Value:** Y, N
- **Parser:** BooleanParser