



Cisco BTS 10200 Softswitch ENUM Query for N11 Services Feature, Release 6.0.4

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The support for Electronic Number mapping (ENUM) Query for N11 Services feature allows the Cisco BTS 10200 Softswitch to perform an ENUM query on the calling subscriber digits for N11 services such as REPAIR (611), BUSINESS (811), NON-EMG (311), and Directory Assistance (DA) (411). The call routing is based on the translated number received in the ENUM response from the ENUM server.

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Overview

The ENUM Query Support for N11 Services feature is based on the existing ENUM query framework in BTS 10200. For more information on ENUM capabilities and N11 services supported in BTS 10200, see [Electronic Number Mapping and Routing](#) chapter in the *Routing and Dial Plan Guide*. For more information on *n11 Support*, see the [Network Features](#) chapter in the *Network and Subscriber Feature Descriptions Guide*.

This feature allows BTS 10200 to perform an ENUM query on the calling subscriber number for N11 code types such as REPAIR (611), BUSINESS (811), NON-EMG (311), and Directory Assistance (DA) (411) only. The call routing is based on the translated number received in the ENUM response from the ENUM server.

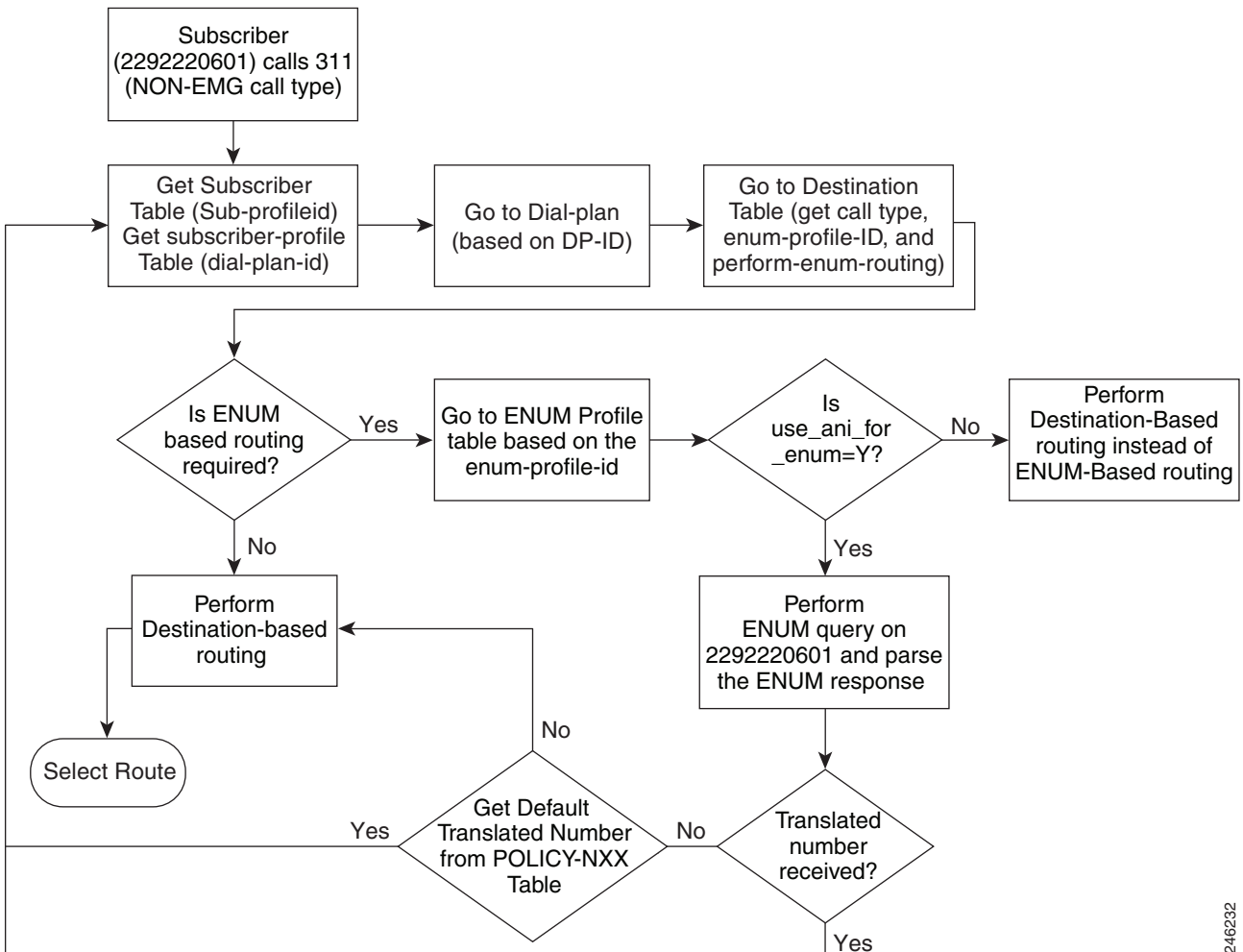


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Since the calling subscriber originating the N11 service may be from a different rate center or region, the ENUM query method uses the closest path to help route the call to the destination in a short time. If the ENUM query fails for any reason, the call is routed based on the default translated number specified in the **POLICY-NXX** table. If the default translated number is not provisioned in the **POLICY_NXX** table, the call is routed using destination-based routing.

Figure 1 illustrates ENUM based routing for N11 services.

Figure 1 ENUM Based Routing for N11 Services



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Provisioning the Feature

This section explains how to provision the feature.



Note

The commands shown in this section are only examples; you need to enter values that are appropriate for your network and service requirements. The CLI syntax allows you to use commands in uppercase or lowercase. It also allows you to enter hyphens (-) or underscores (_) interchangeably. (Exceptions, if any, are noted in the procedures.)

For a complete list of tokens for each CLI table, as well as the allowed values, default values, and detailed descriptions for each token, see the *Cisco BTS 10200 Softswitch CLI Database* at this website: http://www.cisco.com/en/US/docs/voice_ip_comm/bts/6.0.4/BTS604_Mainpage.html

The ENUM query is enabled in BTS 10200 using the **USE-ANI-FOR-ENUM** token in the **ENUM-PROFILE** table. When this token is set to *Y*, the ENUM query is performed on the calling subscriber's number. This token provides the flexibility to the operator to disable ENUM query for N11 services. In such a scenario, the routing of the call is carried out using destination-based routing. The default value of this token is *N*.

SUMMARY STEPS

1. **add enum_profile**
2. **control enum_profile**
3. **add CA-CONFIG**
4. **change destination**
5. **change call_agent_profile**

DETAILED STEPS

	Command	Purpose
Step 1	<pre>add enum_profile id=privateENUM; ENUM_SERVER_DOMAIN= enum.ipclab.cisco.com; TOP_LEVEL_DOMAIN= ipclab.cisco.com; TEST_QUERY_STRING= testqry.e164.sp.com; ENUM_QUERY_TIMEOUT= 300; USE_ANI_FOR_ENUM= Y; ENUM_SERVER_DOMAIN_TTL= 10; PFX_DIGITS= 1; DEL_DIGITS= 0; TEST_QUERY_INTERVAL= 30; NEXT_ENUM_PROFILE_ID= carrierenum</pre>	<p>Add the ENUM profile for the call type.</p> <p>Note It is mandatory to specify the ENUM_SERVER_DOMAIN token.</p> <p>Note You must specify the NEXT_ENUM_PROFILE in order to query the same or different ENUM server with a different root, when you see the 'no record found' message at the first query. USE_ANI_FOR_ENUM must be set to <i>Y</i> to perform a call-based ENUM query.</p>
Step 1	<pre>control enum_profile id=privateENUM; mode=FORCED; target_state=INS;</pre>	Control the ENUM profile and bring it to working state.
Step 2	<pre>add CA-CONFIG default-enum-profile id=privateENUM</pre>	<p>Change the ENUM profile ID in the CA-CONFIG table. This can also be added in the DESTINATION table.</p> <p>Note Provisioning of default ENUM profile ID in CA_CONFIG is optional. Provision the ENUM profile in the DESTINATION table.</p>

	Command	Purpose
Step 3	<code>change destination dest_id=tbhrn17; call_type=non_emg;route_type=route;route_guide_id=n11;enum_profile_id=privateenum;perform_enum_routing=y;enum_query_type=enum;</code>	Add the ENUM profile ID and set PERFORM_ENUM_ROUTING to Y in the DESTINATION table. Verify that the ENUM query type is set to ENUM.
Step 4	<code>change call_agent_profile id=ca146;enum_supp=y;</code>	Change the ENUM_SUPP to Y in CALL_AGENT_PROFILE table.

Managing the Feature

This section provides information on managing the feature.

Measurement Counters

To track the number of ENUM queries launched by the BTS 10200, the `ENUM_QUERY_LAUNCHED` counter is used.

Other ENUM Measurement Counters are:

- `ENUM_QUERY_SUCCESSFUL`
- `ENUM_QUERY_TIMEOUT`
- `ENUM_QUERY_NO_VALID_URI`
- `ENUM_QUERY_NO_URI`
- `ENUM_QUERY_NO_SERVER`

For more information on the measurements used in BTS 10200, see the *Cisco BTS 10200 Softswitch Operations and Maintenance Guide*.

Billing Information

The system captures the following information in the call detail records (CDR):

- Whether or not the ENUM query was performed for the call, and the result of the query (success/failure)
- Time stamp
- Universal Resource Identifier (URI) returned from the ENUM server

For more information, see the *Cisco BTS 10200 Softswitch Billing Guide*.

Additional References

Related Documents

Related Topic	Document Title
Summary of features and usage guidelines for this release	Cisco BTS 10200 Softswitch Release Notes
Reference listing of all CLI tables and tokens	Cisco BTS 10200 Softswitch CLI Database
ENUM Capability	Cisco BTS 10200 Softswitch Routing and Dial Plan Guide
ENUM Measurements	Cisco BTS 10200 Softswitch Operations and Maintenance Guide

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■ **Additional References**