



Home



- >Hipath Knowledge Base Home Page
- >Hipath Knowledge Base User Guide

Support Home | Answers | Ask a Question | My Account | Help

Search Browse

Search by Product:

All Subs:  Search By:

Answer Number	133
Products	<a href="#">HiPath DX</a> <a href="#">Features</a> <a href="#">Programming</a> <a href="#">RealitiS DX</a> <a href="#">Features</a> <a href="#">Programming</a> <a href="#">ISDX</a> <a href="#">Features</a> <a href="#">Programming</a>
Date Created	24/02/2006 01:56 PM
Last Updated	06/11/2012 05:57 PM

- [Print Answer](#)
- [Email Answer](#)

### DX - Routeing and Barring

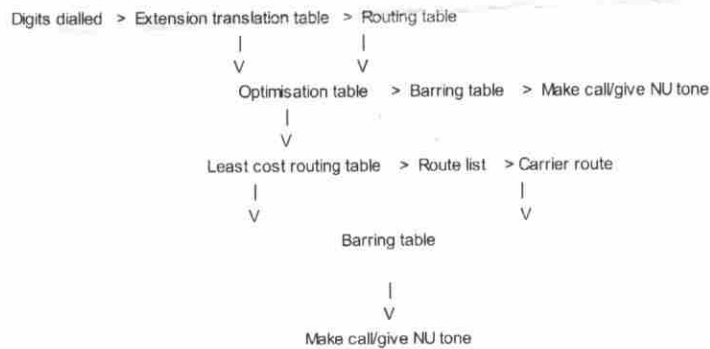
#### Question

Call routing and barring

#### Answer

To bar a certain number from being dialled from one or more extensions it helps to understand the process the DX takes in routing a call. Lets assume that we would like to bar an 0906 123456 from being dialled. The call processing flow starts as soon as an extension starts to dial the first digit, in this case the digit 9.

the call flow is as follows (somewhat simplified)



The following is an example of call routing when an extension dials a number. The extension has a TAC of 3. The commands used to find this information are listed below .

#### extension dials 9

The dx checks the extension digit translation table and finds translations for 9 so it waits for the next dialled digit to see if the next digits matches an entry. Note: if 9 alone translated to another digit the translation would be made and the DX would not wait for the next dialled digit.

#### extension dials 0

The **extension translation table** has no entries for 90, so the DX checks the **routing translation table**. There are entries for 90 numbers in the routing table so the dx waits for the next digit.

#### extension dials 9

There are no entries for 909 in the routing table so the DX checks the **'First Digit Table'** to find what digit 9 is used for - it's a **'trunk access code'**. In this case an **'optimise routing table'** is used for this access code at this time of day . Table 1 is used but there are no entries in the table so the DX checks if **LCR** (least cost routing) is activated for code 9. LCR is activated, so the DX checks the LCR digit table to find which route list to use. The number 09 does not appear in the table so the default route list (1) is used. The first **carrier route** in

route list 1 is carrier route 1 and the second is route 2.

#### extension dials the rest of the digits.

The DX checks the dialled digits in the **route restriction table** associated with carrier route 1 in the current time zone (table 2) which applies to a TAC of 3. There is no match for 090 (or any number

beginning with 0) so the call can proceed. If the call was barred, the DX would have repeated the process for the next carrier in the route list before giving the extension **NU** tone or routing the call. In addition to the barring tables the system will check that TAC 3 allows access to the trunk group that the LCR directs the call to.

The following is an actual dialog with a system to show the commands that can be used to find out about the call routing and barring. The input to the system is shown in blue.

**LFDG** (To list the usage of a first digit in a dialled digit string)

```
?lfdg
DIGIT:9
DIGIT 9 : TRUNK/FEATURE CODE
```

**LDAP** (list a single or all daily access patterns to find out which time zones are in use)

```
?ldap
PATN:a
TIME BAND      P1 P2 P3 P4 P5 P6 P7 PE
08:00 - 09:00  01 01 01 01 01 03 05 00
09:00 - 13:00  02 02 02 02 02 03 05 00
13:00 - 18:00  01 01 01 01 01 04 05 00
18:00 - 23:56  05 05 05 05 05 05 05 00
23:56 - 23:57  05 05 05 05 05 05 05 00
23:57 - 23:58  05 05 05 05 05 05 05 00
23:58 - 23:59  05 05 05 05 05 05 05 00
23:59 - 08:00  05 05 05 05 05 05 05 00
CURRENT ZONE   01
```

**LEX** (to list and extension to find out its TAC)

```
?lex 1211
EN1211 EC012006 CS03 TA03 MOH 000
TAC = 3
```

**LSSP** (list system parameters SPEDT SPRDT to find extension & routing translation tables)

```
?lssp spedt
SPEDT 000002 00002. ---2 0000 0000 0000 0010B
Extension table = 2
```

```
?lssp sprdt
SPRDT 000012 00010. ---0 0000 0000 0000 1010B
Routing table = 10
```

**LDTT** (list translation tables for the digit 9)

```
?ldtt 2 9
93          90203
97          90207
98          90208
```

```
?ldtt 10 9
91181      9118707*
91182      9118707*
91183      9118707*
91184      9118449*
91185      9118707*
91186      9118707*
91187      9118707*
91188      9118707*
91189      9118707*
91180      9118707*
9153       9118449*
9192       9118707*
9020731112 12
9020712345 ##*# (this is a popular way to bar a number for all users, ##*# is an invalid
feature code)
9080001234 901452123456
```

**LACO** (To list the optimised/alternative route tables associated with a trunk access code and time zone)

```
?laco
CODE:9
ZONE 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
CODE 9
OPT(V) 01 01 01 01 01 01
ALT(V) 02 02 02 02 02 02
OPT(D) 01 01 01 01 01 01
ALT(D) 02 02 02 02 02 02
```

Table = 1

**LOAT** (To list all or part of an optimised or alternative route table.)

```
?loat
TABLE:1
DIGITS :a
NUMBER OF SPARE ENTRIES = 20463
```

Table is empty

**LACA** (To list the settings of the attributes associated with a trunk main group access code. In particular the LCR setting)

```
?laca
CODE:9
CODE TYPE TQU TCB LCR IRD SHA
9 EXCH N N Y N N
```

LCR is activated

**LLDT** (To list all or part of the Least Cost Routeing (LCR) Digit Table.)

```
?lldt
ZONE 1
DIGITS :0
ZONE
01
01933444
VOICE LIST 02
DATA LIST 02
08456000
VOICE LIST 02
DATA LIST 02
```

to list the default route list

```
?lldt 1 d
ZONE
01
DEFAULT
VOICE LIST 01
DATA LIST 03
```

**LRL** (List the carrier routes in a route list. Which is the order the system will try to route calls via the available carriers)

```
?lrl 1
CARRIER ROUTE
001 001
002 002
003 #####
```

**LCRT** (To list the attributes of one or all carrier routes. to check which trunks are going to be accessed)

```
?lcrt 1
CR NEP* MDT* SEND FREQ1 SSS FREQ2 STS FREQ3 SLS OUT CIL
01 8719 001 MF4 N 000 N 000 N 000 HRS N
CSI
DEPT N
```

?lrl 2

```

TR114
CR NEP      MDT SEND FREQ1 SSS FREQ2 STS FREQ3 SLS OUT CIL
02 9       001 MF4 N    000 N    000 N    000 FRS N
CSI
DEPT N
    
```

\*NEP = The digits used to access a carrier (network exit point)  
 \*MDT = Modify digit table, can be used to change the dialled digits after the access code. The MDT is often used to add the full PSTN code in front of a local number. e.g caller dials 8541 1234 MDT adds 020

LTK (To list the attributes of trunks used here to check the trunk group by the code used as NEP)

```

?lk c 871
TK TYPE PAD  MG TG DIR DSA OAD NSA SIG  CCT PSP
0009 DPNS 010601 010 010 Y  DDI Y  DANS    038
0010 DPNS 010602 010 010 Y  DDI Y  DANS    038
0011 DPNS 010603 010 010 Y  DDI Y  DANS    038
0012 DPNS 010604 010 010 Y  DDI Y  DANS    038
    
```

```

?lk c 9
TK TYPE PAD  MG TG DIR DSA OAD NSA SIG  CCT PSP
0039 DASS 012301 000 000 BOTH DDI Y  DANS    036
0040 DASS 012302 000 000 BOTH DDI Y  DANS    036
0041 DASS 012303 000 000 BOTH DDI Y  DANS    036
0042 DASS 012304 000 000 BOTH DDI Y  DANS    036
    
```

LTGA (To list the trunk access privileges assigned to trunk main groups.)

```

?lga      TAC 3
GROUP:10  |
ZONE:1    V
TAC       0000000000011111111111222222222233
          01234567890123456789012345678901
MG010
Z 01     N
    
```

```

?lga
GROUP:0
ZONE:1
TAC       0000000000011111111111222222222233
          01234567890123456789012345678901
MG000
Z 01     N
    
```

Note: If barring was in place a N would be listed under the TAC 03 as in TAC 00

LCRR (To list the route restriction table number associated with one or all carrier routes operating within a specific time zone and TAC.)

```

?lcr
CARRIER ROUTE:1
TAC:3
ZONE 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15
CR 0001
TAC
03      002 002 002 002 002 002
    
```

Table 2 is used

```

?lrrt 2
DIGITS :a
BARRED
153
155
NUMBER OF SPARE ENTRIES = 20463
    
```

**Other useful commands**

LRRU (To list the trunk group access code/time zone/TAC combination associated with a route restriction table. Also, to list all spare route restriction tables.)

```

?lrru
TABLE:1
    
```

DX - Routeing and Barring

```

TAC 00000000001111111111222222222233
    01234567890123456789012345678901
CODE9
Z 00 X
Z 01 X X X XX XX X
Z 02 X XX XX XX X
Z 03 X XX XX X
Z 04 X XX X
Z 05 X X
CODE80
Z 00 X
Z 01 X XX XX XX X
Z 02 X XX XX XX X
Z 03 X XX XX X
Z 04 X XX X
Z 05 X X
CODE891
Z 00 X
Z 01 X
Z 02 X
Z 03 X
Z 04 X
Z 05 X

```

**LACR** (To identify the route restriction tables associated with a trunk group access code for all configured time zones and all or selected Trunk Access Classes (TACs).Note: Only used non LCR calls)

?lacr

CODE9

TAC:3

ZONE 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15

CODE9

TAC

03 002 002 002 002 002 002

?

This also uses route restriction Table 2.

To add a number to a barring table use the **ARRT** command

e.g. adding 09 to table 2

?arrt 2 09

To change an extension's TAC use the **STAC** command

e.g. give extension 2143 a TAC of 2

?stac 2143 2

Further information from the DX documents

[Routeing](#)

Notify Me by Email if this Answer is Updated

How well did this answer your question?

How well did this answer your question?

100%
  75%
  50%
  25%
  0%

Submit Rating

Users who viewed this answer have also viewed

- [Can I bar a phone from dialling out after 6pm?](#)
- [DX - Barring calls between internal extensions](#)
- [Call Barring Integrity](#)
- [How do I Bar calls to specific numbers, ie 090?](#)
- [DX - Barring particular callers \(by CLI\)](#)

[Back to Search Results](#)



©Unify Enterprise Communications Limited 2014.  
[Privacy Policy](#) / [Terms of use](#)