

All rights reserved. Passing on and copying of this document, use and communication of its contents not permitted without authorization from Alcatel.

Establishment	Alcatel-Lucent India Ltd.
GURGAON 2011	CREATION OF PRA

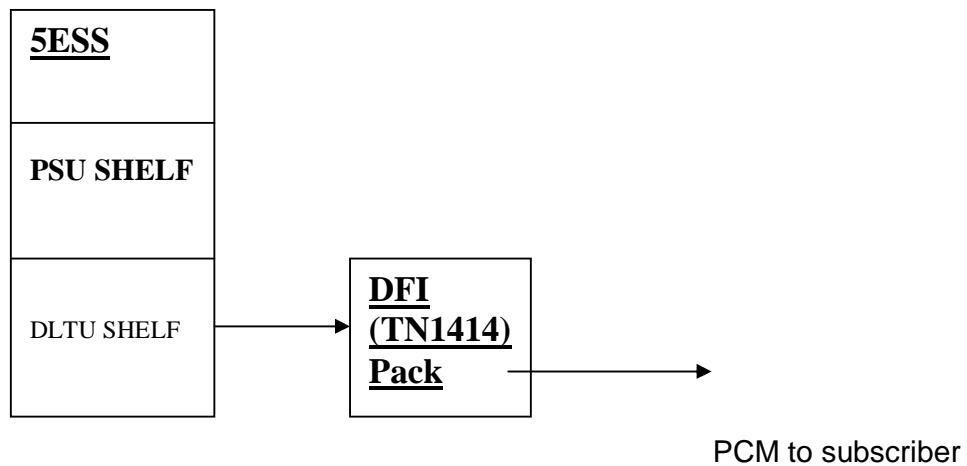
Area	:	ALCATEL-LUCENT 5ESS SWITCH
Type	:	TECHNICAL NOTE

IMPLEMENTATION BY	SITE
--------------------------	-------------

DOCUMENT PREPARED BY	PRANAY DESAI, 5ESS TAC
DOCUMENT REVIEWED BY	VINOD MONTEIRO, 5ESS TAC HEAD

1. INTRODUCTION

This technical note describes the procedure for setting up primary rate access directly connected to the exchange [at trunk unit \(DFI of DLTU\)](#). This procedure is based on an example which you can adapt to fit your exchange's configuration.



2. PREREQUISITE

- 1) The Switching Module (SM) from which PRI needs to be given must be equipped with a PSU shelf with at least one of the PH's defined with EISDN functionality and having at least 4 consecutive spare channels available for definition of the PRI.
- 2) The Switching Module (SM) from which PRI needs to be given must be equipped with a DLTU shelf with at least one DFI pack (TN1414 pack) available with E1's from the same available for definition of the PRI.

3. LIMITATIONS

1. Review RC/V 95.11 (FETVL) for feature PRADFI and ensure maximum allocated quantity of PRA's that are allowed to be created is not exhausted(Refer field MAX for the maximum value allowed and ensure it is less than the USED count). A sample RC/V 95.11 form is as below. Kindly note the same is site specific and MAX and USED values will vary based on site's initial requirement and quantity used. **If the used quantity is equal to max quantity then the subscription has to be enhanced by procuring the password for additional quantities which are required to be grown.**

SCREEN 1 OF 1

RECENT CHANGE 95.11

FEATURE VALIDATION

```
*1. FEATURE    PRADFI
#2. CODE      m8K03t5v268tnY8PpLr03tssxpsno (sample)
&3. MAX       50
&4. USED      45
&5. ENABLED   _
```

&6. EXPDATE _____

2. One PH3 pack (TN1371C) defined with EISDN functionality has 128 channels available for definition of BRA and PRA's. 1 PRA requires 4 consecutive channels of the PH while 1 BRA subscriber requires only 1 channel of this PH. Ensure atleast 4 consecutive free channels are available in the PH from which PRI is being defined before proceeding with PRA creation.

3. The Number of PRA's that can be defined from an SM also depends on the type of DF pack equipped in the PSU shelf. Kindly note that a UN192 DF pack supports only 1 PIDB and upto 6DPIDB's thus limiting the number of PRI's that can be given from this pack to 31 (1 PIDB has 31 definable timeslots available and 1 PRA requires 1 Full Timeslot) whereas a UN348/UN399 DF-MP pack supports upto 4 PIDB's and 0 DPIDB's meaning a maximum of 124 PRA's can be defined from this pack although no BRA's can be defined from the DF-MP pack.

Note: Normally RSMs are equipped with UN192 DF pack PSU shelf to be able to cater to both BRA's and PRA's.

4. PRA CREATION PROCEDURE

1. Add a subscriber class in view 1.5(SBCLS) with ORIG CLASS EISDN and TERM CLASS IPBX to use regular DA tables. Sample RC/V form attached as below.
- 2.

```
SCREEN 1 OF 1          RECENT CHANGE 1.5 SBCLS
                   CLASS CHARACTERISTICS -- SUBSCRIBER GROUP
```

```
*1. LOCAL AREA    01
*2. SB CLASS      IPX
#3. ORIG CLASS    EISDN
#4. TERM CLASS    IPBX
#5. SCR INDEX     21
6. DIGIT ANL     5
&7. NBR OF LINES  71
```

TRAFFIC DISPERSION MEASUREMENTS

```
#8. SRC MEASMNT   0
#9. DEST MEASMNT  0
10. REMARKS       ISDN LINES
```

Enter Review, Change-insert, Validate, or Print:

	4/14
- CREATION OF PRA	

2. Check for free PICBs and PIDBs on the available CIs and DXs in view 8.3(EMCIA) and 8.5 (EMDIA).

3. Grow in the new DLTU pack in view 9.2 (EPDLT). FAC0 MODE and FAC1 MODE should be CCS. Sample RC/V form attached as below.

SCREEN 1 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

- *1. SM 003
- *2. DLTU 00
- *3. DFI 05
- *4. FAC IND 2
- #5. TYPE TRUNK
- #6. CLI 1000e
- #7. CHNLIND 32
- #8. INTF UNIT 0
- #9. CI 0
- #10. PICB 6
- 11. C5 GDSF _

Enter Review, Change-insert, Validate, screen#, or Print:

WRLD3

SCREEN 2 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 INFORMATION

- 12. FAC0 APPL TYPE _____
- 13. FAC0 DI 0
- 14. FAC0 PIDB 16
- 15. FAC0 EQSTAT O
- &16. FAC0 PATTERN _
- 17. FAC0 MODE CCS
- 18. FAC0 FACILITY BANK OF BARODA
- 19. FAC0 FRM SET 01
- 20. FAC0 CGADLYID 00
- &21. FAC0 DCME _____
- 22. FAC0 EECU N

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 3 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

HOST FAC

23. FAC0 COMM LINK N

REMOTE FAC

24. FAC0 SUBGRP RLI MUX _

25. FAC0 PORT RLI MUX _

26. FAC0 AFAC ID 0

Enter Review, Change-insert, Validate, screen#, or Print:

WRLD3

SCREEN 4 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 SIGNALING BIT INFORMATION	38. FAC0 N0	N
27. FAC0 SA5 FR0TS16 1	39. FAC0 N1 THRU N4	N
28. FAC0 SA7 FR0TS16 1	40. FAC0 SPARING	N
29. FAC0 SA8 FR0TS16 1		
30. FAC0 ODD INTL 1		
31. FAC0 EVEN INTL 1		
32. FAC0 SA4 NATL0 1		
33. FAC0 SA5 NATL1 1		
34. FAC0 SA6 NATL2 1		
35. FAC0 SA7 NATL3 1		
36. FAC0 SA8 NATL4 1		
37. FAC0 IE AND IO	N	

Enter Review, Change-insert, Validate, screen#, or Print:

WRLD3

SCREEN 5 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 ECHO CANCELLER PACK	52. FAC0 RSD ECTL	_
41. FAC0 EC5 N	53. FAC0 TRANS EN	_
42. FAC0 ECSU _	54. FAC0 EC BYP	_
43. FAC0 POS EC5 _	55. FAC0 EC5 MODE	_
44. FAC0 CI EC5 _		
45. FAC0 PICB EC5 _		
46. FAC0 CLI EC5 _____		

47. FAC0 END PATH _____
 48. FAC0 TONE DIS _____
 49. FAC0 ALPHA VAL _____
 50. FAC0 TN MATCH _____
 51. FAC0 NB ENGDT _____

Enter Review, Change-insert, Validate, screen#, or Print:

WRLD3

SCREEN 6 OF 9 RECENT CHANGE 9.2 EPDLT
 0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 INFORMATION

56. FAC1 APPL TYPE _____
 57. FAC1 DI 0
 58. FAC1 PIDB 17
 59. FAC1 EQSTAT O
 &60. FAC1 PATTERN _____
 61. FAC1 MODE CCS
 62. FAC1 FACILITY NP-PUNE-6
 63. FAC1 FRM SET 01
 64. FAC1 CGADLYID 00
 &65. FAC1 DCME _____
 66. FAC1 EECU N

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 7 OF 9 RECENT CHANGE 9.2 EPDLT
 0 DIGITAL LINE TRUNK UNIT PACK

HOST FAC

67. FAC1 COMM LINK N

REMOTE FAC

68. FAC1 SUBGRP RLI MUX _
 69. FAC1 PORT RLI MUX _
 70. FAC1 AFAC ID 0

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 8 OF 9 RECENT CHANGE 9.2 EPDLT
 0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 SIGNALING BIT INFORMATION

71. FAC1 SA5 FR0TS16	1	82. FAC1 N0	N
72. FAC1 SA7 FR0TS16	1	83. FAC1 N1 THRU N4	Y
73. FAC1 SA8 FR0TS16	1	84. FAC1 SPARING	N
74. FAC1 ODD INTL	1		
75. FAC1 EVEN INTL	1		

All rights reserved. Passing on and copying of this document, use and communication of its contents not permitted without authorization from Alcatel.

76. FAC1 SA4 NATL0 1
 77. FAC1 SA5 NATL1 1
 78. FAC1 SA6 NATL2 1
 79. FAC1 SA7 NATL3 1
 80. FAC1 SA8 NATL4 1
 81. FAC1 IE AND IO N

SCREEN 9 OF 9

RECENT CHANGE 9.2 EPDLT
 DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 ECHO CANCELLER PACK		96. FAC1 RSD ECTL	_
85. FAC1 EC5	N	97. FAC1 TRANS EN	_
86. FAC1 ECSU	___	98. FAC1 EC BYP	_
87. FAC1 POS EC5	___	99. FAC1 EC5 MODE	___
88. FAC1 CI EC5	_		
89. FAC1 PICB EC5	___		
90. FAC1 CLI EC5	_____		
91. FAC1 END PATH	_____		
92. FAC1 TONE DIS	_____		
93. FAC1 ALPHA VAL	___		
94. FAC1 TN MATCH	_		
95. FAC1 NB ENGDT	_		

4. Insert ISDN PBX in 67.1 (IGCHR). Choose a number in the office dialing plan, but not used elsewhere for the lister dirnr. Use subscriber class defined in step 1 for SB CLASS; do not define any Nx64 capability. Sample RC/V form attached as below.

SCREEN 1 OF 4 RECENT CHANGE 67.1 IGCHR
 ISDN PBX CHARACTERISTICS

*1. PBX ID	1257	&13. ORIG2 GRP	_____
#2. INDIAL	Y	&14. ORIG2 TYPE	_____
#3. LISTED DIRNR	222357700	&15. HUNT1 GRP	1257
4. LOCAL AREA	1	&16. HUNT1 TYPE	PRA
#5. SB CLASS	IPX	&17. HUNT2 GRP	_____
6. OVFL PBX ID	_____	&18. HUNT2 TYPE	_____
7. RMN CLD DIGS	ALL	&19. HUNT3 GRP	_____
8. ADD CLD DIGS	_____	&20. HUNT3 TYPE	_____
9. COMPLAINT	N	&21. HUNT4 GRP	_____
#10. LANGUAGE	2	&22. HUNT4 TYPE	_____
&11. ORIG1 GRP	_____		
&12. ORIG1 TYPE	_____	23. REMARKS	dimex diamond

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 2 OF 4 RECENT CHANGE 67.1 IGCHR
ISDN PBX CHARACTERISTICS

24. AMATRC N
 25. SERV PROV N
 26. BILL TYPE BILLAMA
 27. BILL DIR NR 222357700
 28. CRD LIM STATUS I
 29. CRD LIM 0
 &30. CREDIT LIMIT EXCEEDED N
 #31. TYPE OF USER NETWORK
 32. PART BARRING N
 33. ORIG DENIED N
 34. TERM DENIED N
 35. NO PAYMENT N

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 3 OF 4 RECENT CHANGE 67.1 IGCHR
ISDN PBX CHARACTERISTICS

&36. CHANGE TIME _____ 48. IBERCOM PLUS N
 37. RMN PART DIGS ALL 49. VER CHARGE N
 38. ADD PART DIGS _____ &50. NBR DDI RANGES 1
 39. CGPN TREAT OPT &51. NBR EXT RANGES 0
 40. CDPN TREAT OPT &52. NBR BRA ACCESSES 0
 41. PART ALLOW N &53. NBR PRA ACCESSES 1
 42. LINE STUDY Y 54. LOG EPS NUM _____
 #43. EPLS PRIORITY 0 55. FORCE NAT FORMAT Y
 44. NX64 RATE _____
 45. NX64 TSA TYPE _____
 46. LINE BILL N
 47. IBERCOM N

Enter Review, Change-insert, Validate, screen#, or Print:

- CREATION OF PRA	9/14
-------------------	------

```

SCREEN 4 OF 4                RECENT CHANGE 67.1 IGCHR
                             ISDN PBX CHARACTERISTICS
BEARER SERVICE GROUPS      61. OUT PORTED  N
&56. GROUP 1  SP3P1
&57. GROUP 2  CSDATA
&58. GROUP 3  _____
&59. GROUP 4  _____
&60. GROUP 5  _____
    
```

5. Insert 67.3 (IGGRP) for the number of the PRA trunk group, PRA for GROUP TYPE, UCD for HUNT TYPE, PBX ID from step 4, FUNCTIONHUNT, PKT TYPE BB or NONE, Nx64 CAPABLE is N. Sample RC/V form attached as below.

```

SCREEN 1 OF 1                RECENT CHANGE 67.3 IGGRP
                             ISDN GROUP
*1. GROUP NR    1257          9. NX64 CAPABLE  N
*2. GROUP TYPE  PRA          &10. NX64 RATE   _____
3. GROUP HTYPE  UCD          &11. NX64 TSA TYPE _____
4. PBX ID       1257         12. DATA RATE  64K
5. FUNCTION     HUNT         &13. GRP SIZE   31
6. POSITION      1            &14. ACT SIZE   30
7. SEMIPERM    N            15. REMARKS     DIMEX DIAMOND
8. PKT TYPE    NONE         16. APPLICATION _____
    
```

Enter Review, Change-insert, Validate, or Print:

6. Insert view 67.3(IGGRP) for the D-channel of the PRA trunk group (use group number 301 if PRA trunk group is 300, for example). GROUP TYPE is PRAD, GROUP HTYPE is NONE, DATA RATE is 64K, rest of the fields N or NONE.

7. Insert view 67.2 for bearer services i.e SP3P1 and CSDATA . Sample RC/V form attached as below.

SCREEN 1 OF 2 RECENT CHANGE 67.2 IGBSC
ISDN PBX BEARER SERVICE GROUP CHARACTERISTICS

*1. PBX ID	1257	13. AOC S	N
*2. BEARER SERV GRP	CSDATA	14. AOC S FLAV	ALL
3. TONES ANNC	N	15. AOC D	N
4. OVERFLOW	N	16. AOC D FLAV	ALL
5. AUDIBLE	N	17. AOC E	N
6. DISPLAY	Y	18. AOC E FLAV	ALL
7. SUBADDR	N	19. AOC DC EC NTF	_____
8. LOW LVL COMP	Y	20. AOC INFO IN UNITS	N
9. HIGH LVL COMP	Y		
10. MC TRACE	NOTRC		
11. MC TRACE NO ANS	N		
&12. SERVICES	N		

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 2 OF 2 RECENT CHANGE 67.2 IGBSC
ISDN PBX BEARER SERVICE GROUP CHARACTERISTICS

USER TO USER SIGNALING

21. UUS1	N
#22. UUS2	N
23. UUS3	N
24. UUS2 IMPLIED	N
25. UUS3 IMPLIED	N
26. UUS3 PROTOCOL	_____
27. NON SRVD USR NTF	_____
&28. NX64 RATE	_____
&29. NX64 TSA TYPE	_____

8. Use view 9.9 (EUPHW) to assign a new PH3 group from the new PH3s or note which groups have GROUP TYPE EISDN.

9. Use view 65.2 (ISPRA) to insert the PRA. The key is the D-channel time slot. (For example, if DLTU0 DFI7 were grown in on SM6, then the EQ NR would be D 00600007016 for facility 0.) PBX ID from step 4, CHNL GROUP NR from step 6, D ISCN based on information gathered in step 7. Make Nx64 CAPABLE N. Sample RC/V form attached as below.

SCREEN 1 OF 5 RECENT CHANGE 65.2 ISPRA
ISDN PRIMARY RATE ACCESS DEFINITION

*1. EQ NR	D 00300005016	13. TYPE OF USER	NETWORK
#4. PBX ID	1257	14. MSN	N
#5. D CHNL GROUP NR	1258	15. MAX CALLS	1
#6. D CHNL MEMBER NR	1	16. TEI MGMT	Y
#7. D ISCN	001092	17. OUT MSG SEG	N
8. TRANS PRIORITY	TPRIORD	&18. DEFAULT DIR NR	
9. EPLS PRIORITY	0	19. NX64 CAPABLE	N
10. CGPN TREAT	OPT	20. DATA RATE	64K
11. CDPN TREAT	OPT	21. REMARKS	DIMEX

DIAMOND
12. AUDIBLE N

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 2 OF 5 RECENT CHANGE 65.2 ISPRA
ISDN PRIMARY RATE ACCESS DEFINITION

22. D CHANNEL PS LIST

	TEI	DLCI	TRK	GRP	NR	TRK	NR	EPS	CG	LOG	EPS	NUM	TYPE
1)	---	---	---	---	---	---	---	---	---	---	---	---	---
2)	---	---	---	---	---	---	---	---	---	---	---	---	---
3)	---	---	---	---	---	---	---	---	---	---	---	---	---
4)	---	---	---	---	---	---	---	---	---	---	---	---	---
5)	---	---	---	---	---	---	---	---	---	---	---	---	---
6)	---	---	---	---	---	---	---	---	---	---	---	---	---
7)	---	---	---	---	---	---	---	---	---	---	---	---	---
8)	---	---	---	---	---	---	---	---	---	---	---	---	---

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 3 OF 5 RECENT CHANGE 65.2 ISPRA
 ISDN PRIMARY RATE ACCESS DEFINITION
 22. D CHANNEL PS LIST
 TEI DLCI TRK GRP NR TRK NR EPS CG LOG EPS NUM TYPE

- 9) _____
- 10) _____
- 11) _____
- 12) _____
- 13) _____
- 14) _____
- 15) _____
- 16) _____

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 4 OF 5 RECENT CHANGE 65.2 ISPRA
 ISDN PRIMARY RATE ACCESS DEFINITION

- &41. B CHANNELS PROVISIONED
- | SERV | GROUP | NR | MEMBER | NR | SERV | GROUP | NR | MEMBER | NR |
|------|-------|------|--------|-----|------|-------|------|--------|----|
| 1) | CSDV | 1257 | 0001 | 9) | CSDV | 1257 | 0009 | | |
| 2) | CSDV | 1257 | 0002 | 10) | CSDV | 1257 | 0010 | | |
| 3) | CSDV | 1257 | 0003 | 11) | CSDV | 1257 | 0011 | | |
| 4) | CSDV | 1257 | 0004 | 12) | CSDV | 1257 | 0012 | | |
| 5) | CSDV | 1257 | 0005 | 13) | CSDV | 1257 | 0013 | | |
| 6) | CSDV | 1257 | 0006 | 14) | CSDV | 1257 | 0014 | | |
| 7) | CSDV | 1257 | 0007 | 15) | CSDV | 1257 | 0015 | | |
| 8) | CSDV | 1257 | 0008 | 16) | CSDV | 1257 | 0016 | | |

SCREEN 5 OF 5 RECENT CHANGE 65.2 ISPRA
 ISDN PRIMARY RATE ACCESS DEFINITION

- &41. B CHANNELS PROVISIONED
- | SERV | GROUP | NR | MEMBER | NR | SERV | GROUP | NR | MEMBER | NR |
|------|-------|------|--------|-----|------|-------|------|--------|----|
| 17) | CSDV | 1257 | 0017 | 25) | CSDV | 1257 | 0025 | | |
| 18) | CSDV | 1257 | 0018 | 26) | CSDV | 1257 | 0026 | | |
| 19) | CSDV | 1257 | 0019 | 27) | CSDV | 1257 | 0027 | | |
| 20) | CSDV | 1257 | 0020 | 28) | CSDV | 1257 | 0028 | | |
| 21) | CSDV | 1257 | 0021 | 29) | CSDV | 1257 | 0029 | | |
| 22) | CSDV | 1257 | 0022 | 30) | CSDV | 1257 | 0030 | | |
| 23) | CSDV | 1257 | 0023 | | | | | | |
| 24) | CSDV | 1257 | 0024 | | | | | | |

Enter Review, Change-insert, Validate, screen#, or Print:

10. Use RC/V 65.5 to insert members for this PBX.

```

SCREEN 1 OF 1                RECENT CHANGE 65.5 ISMEM
                             ISDN GROUP MEMBER ASSIGNMENT
*1. GROUP NR      1257
*2. GROUP TYPE   PRA
*3. MEMBER NR    0001
#4. EQ NR       D 00300005001
7. MEMBER QTY   15__ ( <<<<<< Number of Members to be inserted)
&8. PBX ID      1257
V5 FIELDS
9. V51 TIMESLOT  __
    
```

11. Once all of the errors are cleared up and 65.2 inserts successfully, the 112X page for the DFI will show that the facility is a PRA.

5. RESTORING THE PRA D-TRUNK

1. Restore D-channel of the PRA E1 first as below:

```
RST-DTRK:DEN=SM-DLTU-DFI-(16/48),ucl,OOS,DSBLD;
```

Verify that trunk is restored using
OPST-DTRK:SM-DLTU-DFI-TS;

2. Restore the other members of the PRA E1 as below:

```
RST-DTRK:DEN=SM-DLTU-DFI-(1-31),ucl,OOS,DSBLD;
```

Verify that trunk is restored using
OPST-DTRK:SM-DLTU-DFI-TS;