Trazas en Plataformas C&C08 y NGN Huawei

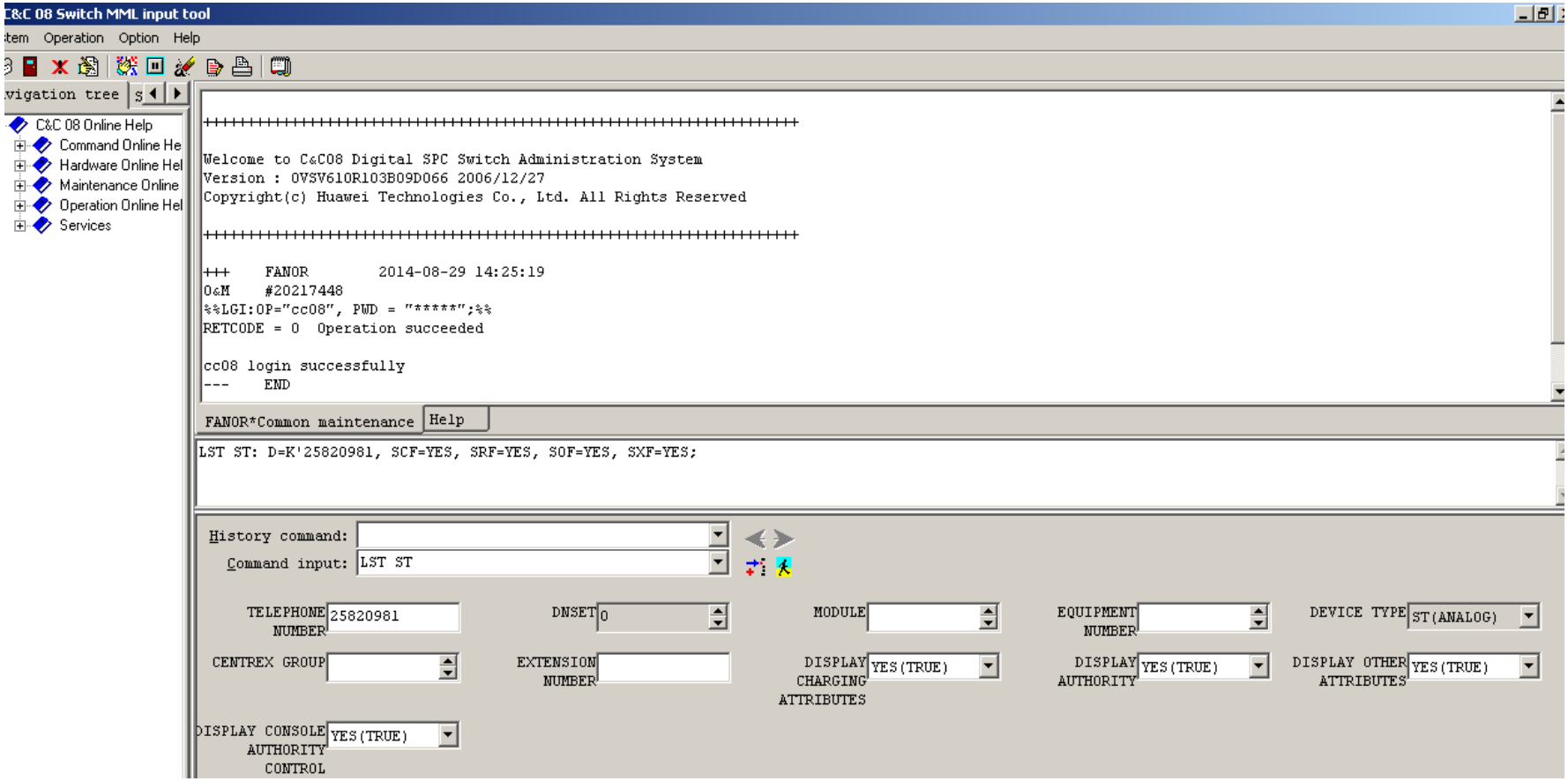
Con Claro es posible

Temario

- Trazas en C&C08.
  - Traza por número de origen línea
  - Traza por trama E1 (PRA)
  - Traza por Calling Number
- Trazas en NGN.
  - Traza por numero de línea perteneciente a IAD
  - Traza por trama E1 (PRA)
  - Traza por Calling Number (Sentido PSTN hacia NGN)
  - Traza SIP
    - Traza de ruta SIP
    - Traza por numero de origen ruta SIP

Trazas C&C08 : Linea

Para poder listar una línea se ejecuta en programa **“C&C08 Switch Client”** el comando “LST ST”, en donde nos pide como parámetros obligatorios, el “Telephone Number” y el “DNSET”. Se debe ingresar siempre el numero sin el código de área, y todos los campos de Display en “YES”



Trazas C&C08 : Linea

```
%%LST ST: D=K'25820981, SCF=YES, SRF=YES, SOF=YES, SXF=YES;%%
RETCODE = 0  Operation succeeded

Subscriber attribute
----------------------
 Telephone number  =  25820981
        Module  =  31
 Equipment number  =  1
     Device type  =  DID_ASL
    CENTREX group  =  None
 Extension number  =  <NULL>
    Number state  =  Normal
  Subscriber type  =  Ordinary
Subscriber status  =  Normal
Additional status  =  Ordinary
     Call source  =  44
 PBX group number  =  None

Charging attribute
------------------
  Charging source code  =  0
Called charging source  =  NONE
        Pulse index  =  0
       Charge pulse  =  16KHZ
    Charging complaint  =  FALSE
    Charging category  =  Period

User authority
--------------
   Call-out authority  =  Intra-office
                       =  Local
                       =  Local toll
                       =  National toll
                       =  International toll
                       =  CENTREX intra-group
                       =  CENTREX out-group
                       =  Custom callout right1
                       =  Custom callout right2
                       =  Custom callout right3
                       =  Custom callout right4
                       =  Custom callout right5
                       =  Custom callout right6
                       =  Custom callout right7
                       =  Custom callout right8
                       =  Custom callout right9
    Call-in authority  =  Intra-office
                       =  Local
                       =  Local toll
                       =  National toll
                       =  International toll
                       =  CENTREX intra-group
                       =  CENTREX out-group
                       =  Custom callin right1
                       =  Custom callin right2
                       =  Custom callin right3
                       =  Custom callin right4
                       =  Custom callin right5
                       =  Custom callin right6
                       =  Custom callin right7
                       =  Custom callin right8
                       =  Custom callin right9
Supplementary service  =  CFU
                       =  DDI
                       =  CLIP
    Call barring group  =  None
     Anti fraud right  =  <NULL>

Other attribute
---------------
          Call pickup  =  None
      Number receiving  =  Automatic
           Ring mode  =  Normal
          ISDN index  =  0
   Incomplete callwatch  =  No watch
       Call watch flag  =  FALSE
  Custom subscriber type  =  None custom subscriber type
         Place Number  =  255
           User name  =  <NULL>
      CLIP sending mode  =  Build-in FSK
      MCT config index  =  0
           Port type  =  ST
      User access mode  =  Ordinary subscriber
Telephone Number Validity  =  TRUE

Frame&Slot
----------
Frame number  =  2
 Slot number  =  2
---    END
```

Numero de equipo

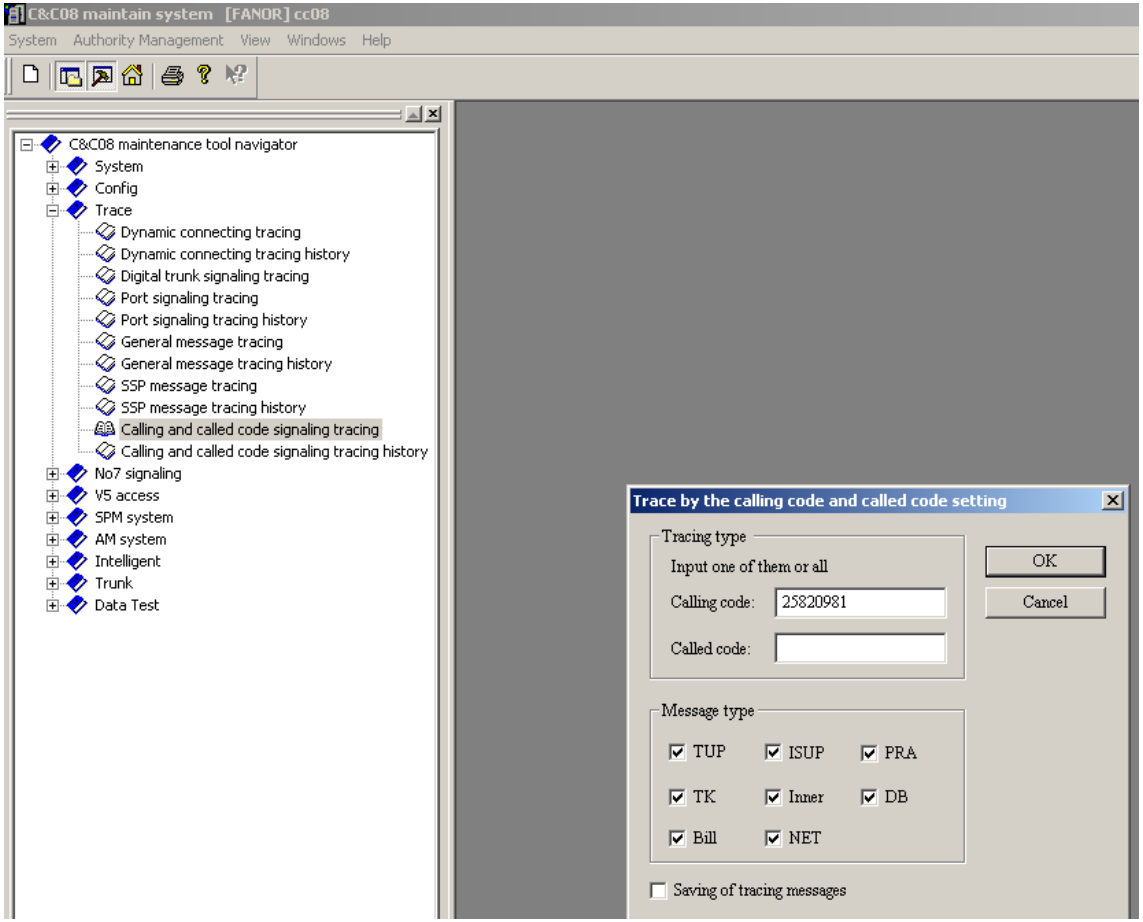
Permisos de salida

Permisos de entrada

Servicios Suplementarios

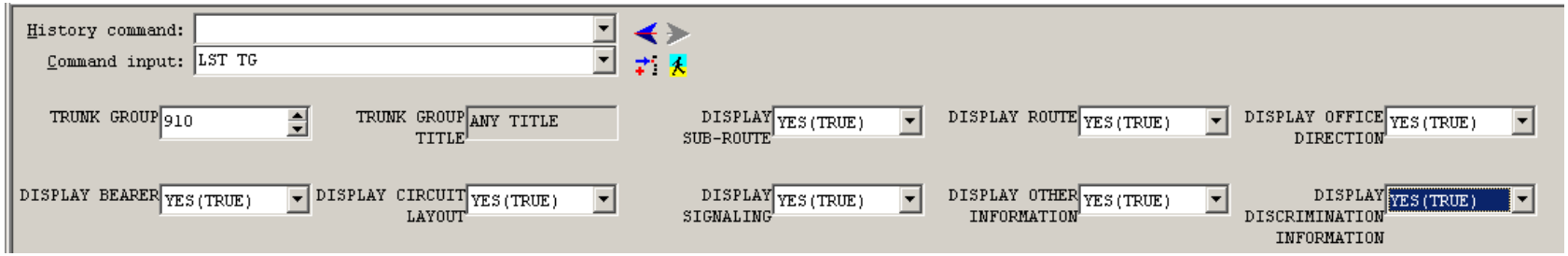
Trazas C&C08 : Linea

Si se tiene el dato del numero de linea origen, con el programa **“C&C08 Switch Maintenance”** es posible poder tracear mediante “Calling and called code signalling tracing”, ingresar el ani sin el código de área en el campo “Calling Code”. Esta traza si aceptamos al cerrar la ventana, queda guardada por defecto en el directorio **C:\CC08\TRACE\Sig**



Trazas C&C08 : TG PRA

- LST TG : Comando que nos permite conocer los parámetros básicos de una ruta. Se ejecuta en programa **“C&C08 Switch Client”**



%%LST TG: TG=910, SSR=YES, SRT=YES, SOF=YES, SL=YES, SC=YES, SS=YES, SOT=YES, CLRDSP=YES;%%
RETCODE = 0 Operation succeeded

Basic parameter

Group number = 910
Title = ING-MONS_SANZ1-1
Circuit type = PRA
Group direction = Bidirectional trunk
Circuit selection = Cyclic
Call-out authority = Intra-office
= Local
= Local toll
= National toll
= International toll
= Custom callout right1
= Custom callout right2
= Custom callout right3
= Custom callout right4
= Custom callout right5
= Custom callout right6
= Custom callout right7
= Custom callout right8
= Custom callout right9
Call-in authority = Intra-office
= Local
= Local toll
= National toll
= International toll
= Custom callin right1
= Custom callin right2
= Custom callin right3
= Custom callin right4
= Custom callin right5
= Custom callin right6
= Custom callin right7
= Custom callin right8
= Custom callin right9

Atributos de entrada y salida

sub-route

Trunk group = 910
Sub-route number = 910
Sub-route title = ING-MONS_SANZ1-1
Priority = 0
Availability = 255

route of relative sub-route

Sub-route number	Route number	Route title
910	910	ING-MONS_SANZ1-1

Subruta

route of relative sub-route

Sub-route number = 910
Office direction = 100
Office direction title = PRA-GENERAL

Circuit distribution

Trunk group	Start circuit	End circuit	Module	Circuit type
910	2496	2527	6	PRA

Modulo y circuitos

PRA signaling parameter

Ecm information = No restrict echo
ECP index = 1023
Enbloc Send CLD = FALSE
Special process CLI and CLD = FALSE
Send Process Indicator = TRUE
Caller number change index = No change

Other parameter

Reserved circuit for ordinary priority = 0
Reserved circuit for priority of insert = 0
Link to satellite circuit = FALSE
Echo suppress = 255
International call = FALSE
Number incomplete = FALSE
Name valid = FALSE
Signaling type = DSS1 subscriber side
Call source = 44
DOD2 = FALSE
Incoming CLIR = No
Outgoing no CLIR = No
Initial tone = FALSE
Initial tone type = Record0
Abnormal send tone = FALSE
Abnormal tone type = Record0
Charging source code = 0
Outgoing trunk charging source = 255
Use opposite pulse = FALSE
Charging complaint = TRUE
CAMA = FALSE
Soft para of service CTRL = <NULL>
Minimum caller number length = 0
CLI provision mode = Default number
Default caller number = 26595400
Call barring group = 65535
Signaling link = 134
Occupancy upper threshold = 0
Occupancy lower threshold = 0
Network management source code = None
Idle circuits for weak call restriction = 0
Idle circuits for forced call restriction = 0
Trunk name = ING-MONS_SANZ1-1
Block the blocker = FALSE
Incomplete callwatch = No watch

Numero cabecera

Número de PRA link

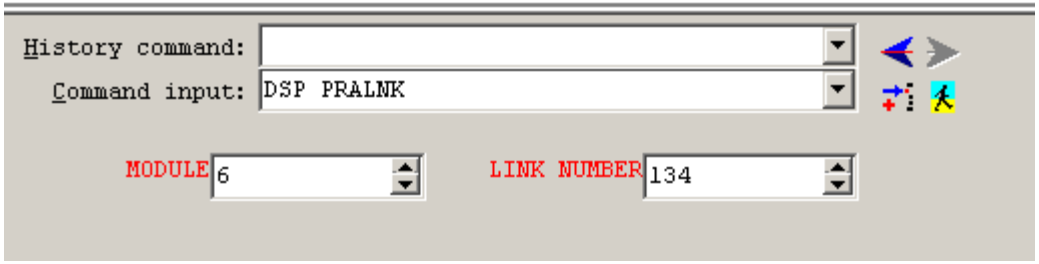
Caller Number discrimination information

Default connect = TRUE
Connecting without or with invalid caller number = TRUE
Need black and white destination code analysis = TRUE

--- END

Comprobando si servicio está operativo

Para el caso anterior también podemos darnos cuenta que hay un problema, realizando un despliegue del estado del PRA LINK, con el comando DSP PRALNK, se necesitan los datos de “modulo” y “numero de pralink” que se obtiene en el comando LST TG que vimos anteriormente



Cuyo resultado, nos arroja el “link status” o estado del D-CHANNEL o señalizador. En este caso como la E1 está alarmada, obviamente el señalizador también lo está.

%%DSP PRALNK: MN=6, LNK=134;%%
RETCODE = 0 Operation succeeded

PRA Link query result

Module number = 6
Link number = 134
Activated status = Active
Link status = Service break

--- END

Trazas C&C08 : TG PRA

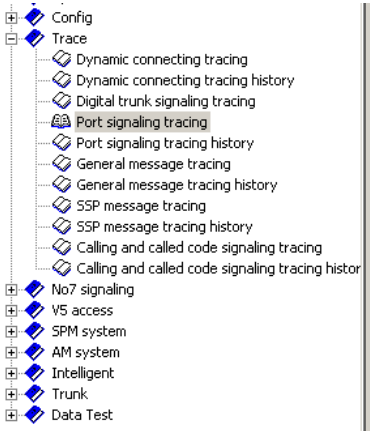
Veamos un ejemplo en que sabemos que la E1 y el D-CHANNEL está operativos y queremos ver traza de una llamada mediante el programa **“C&C08 Switch Maintenance”**, opción **Port Signaling Tracing**

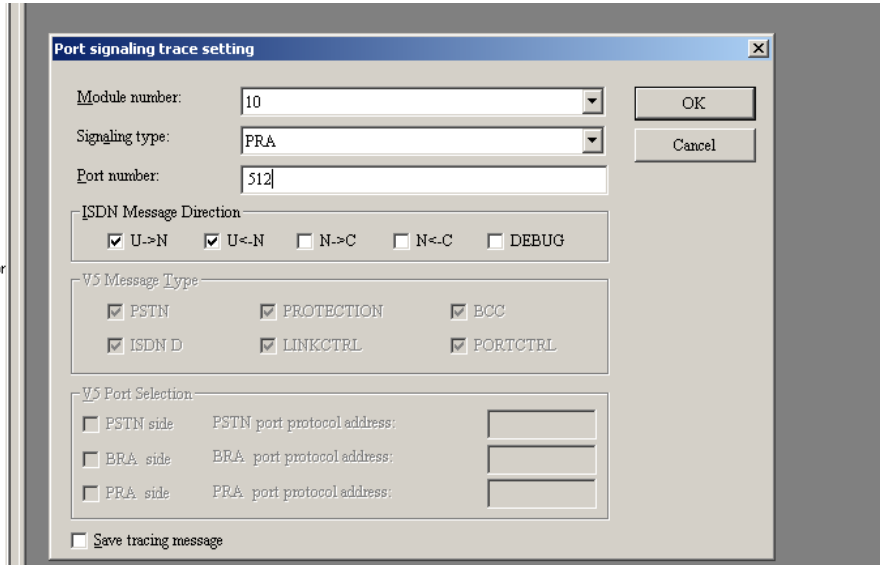
%%LST TKC: TG=614;%%
RETCODE = 0 Operation succeeded

Circuit distribution

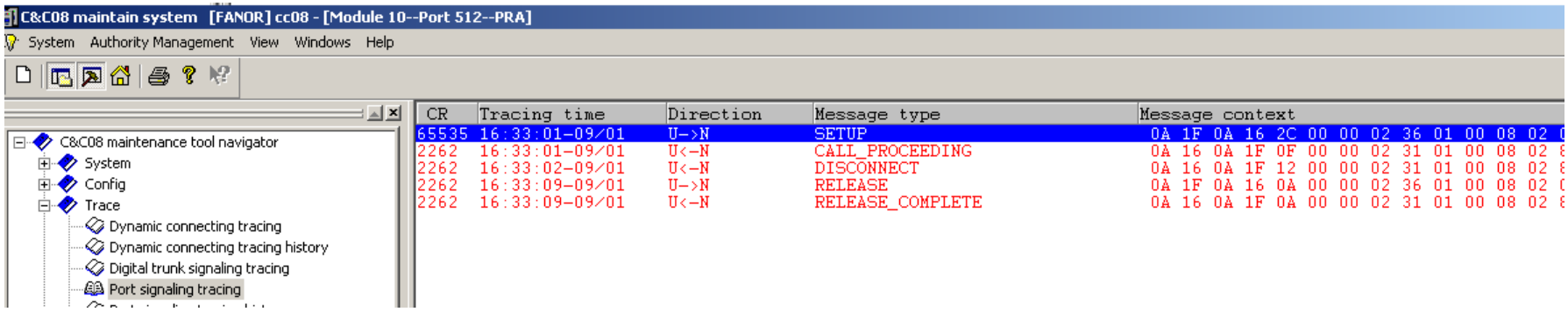
Trunk group	Start circuit	End circuit	Module	Circuit type
614	512	543	10	PRA

Necesitamos el Modulo y Start Circuit

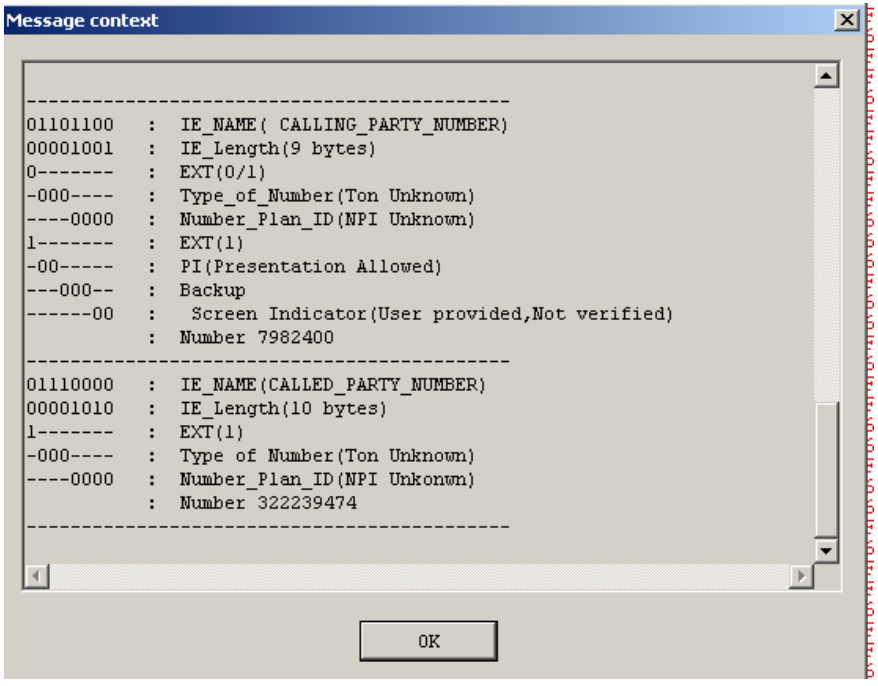




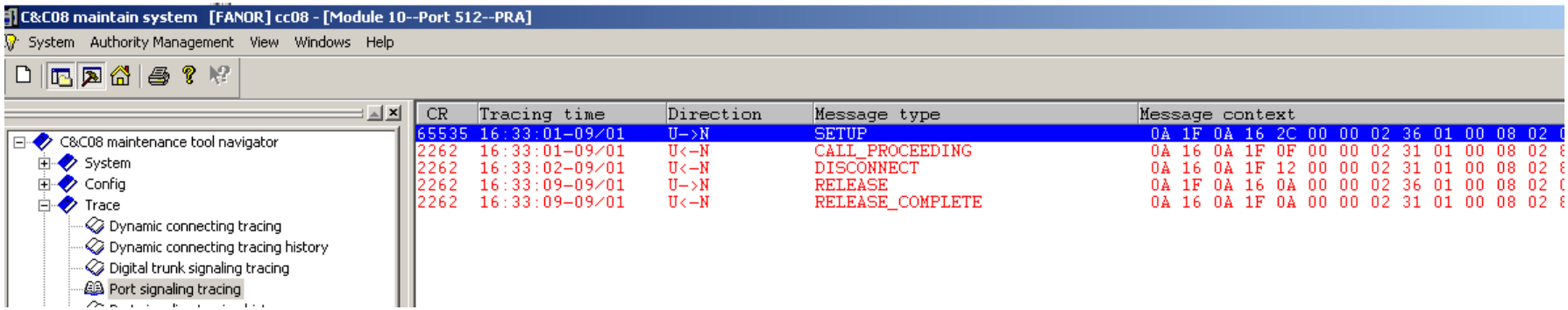
Trazas C&C08 : TG PRA



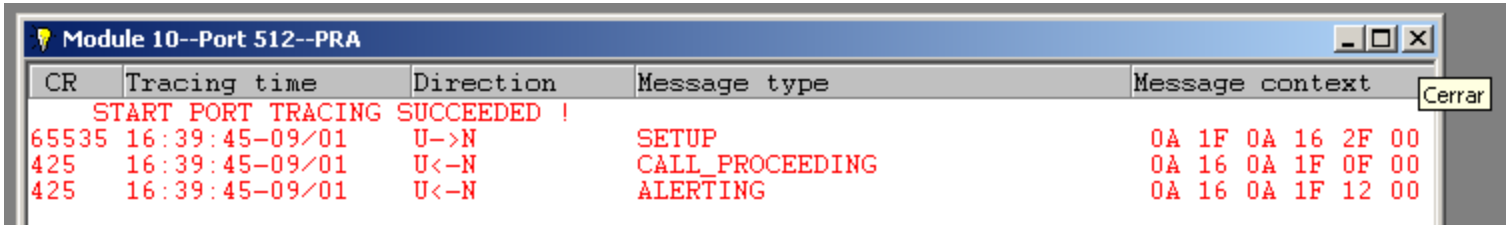
En esta traza La columna direction nos indica en que sentido viene la señalización, por ejemplo la mensajería SETUP viene de U (User) a N (Network), vale decir es una llamada proveniente de la PBX. Es importante identificar que los formatos de Calling o ANI el Called o DNI estén correctos. En este ejemplo claramente el cliente no está enviando correctamente el ANI.

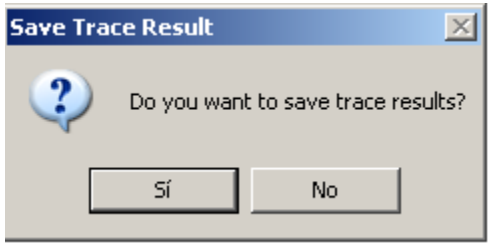


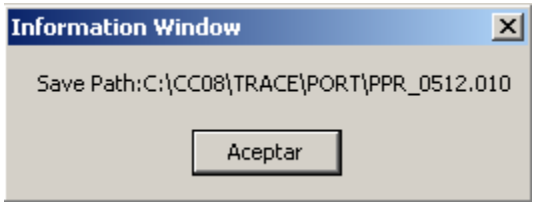
Trazas C&C08 : TG PRA



Si queremos guardar la traza, cerramos la ventana de traceo y el programa nos pregunta si queremos guardar esta.
Si aceptamos la guarda por defecto en el directorio **C:\CC08\TRACE\PORT**

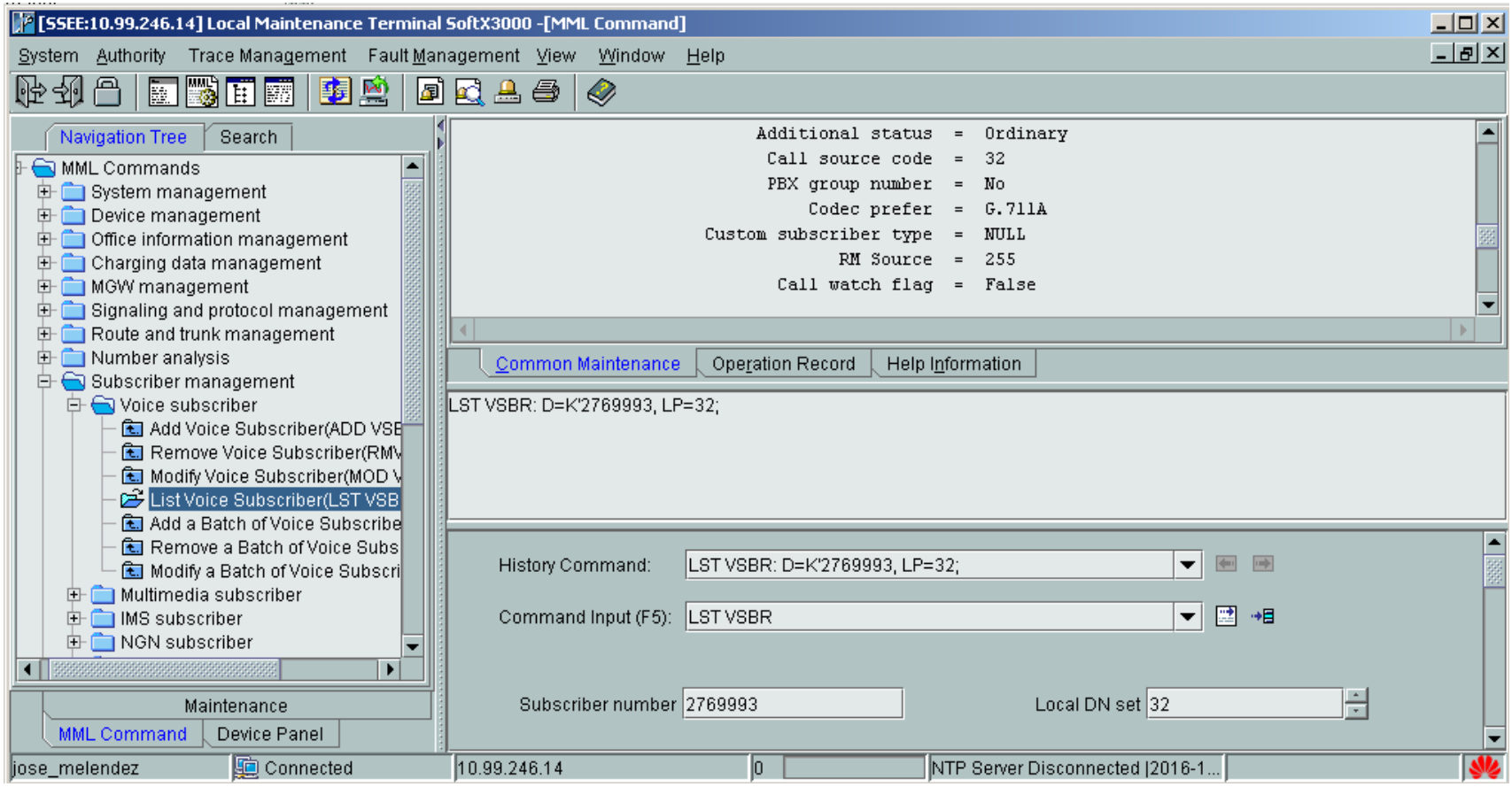






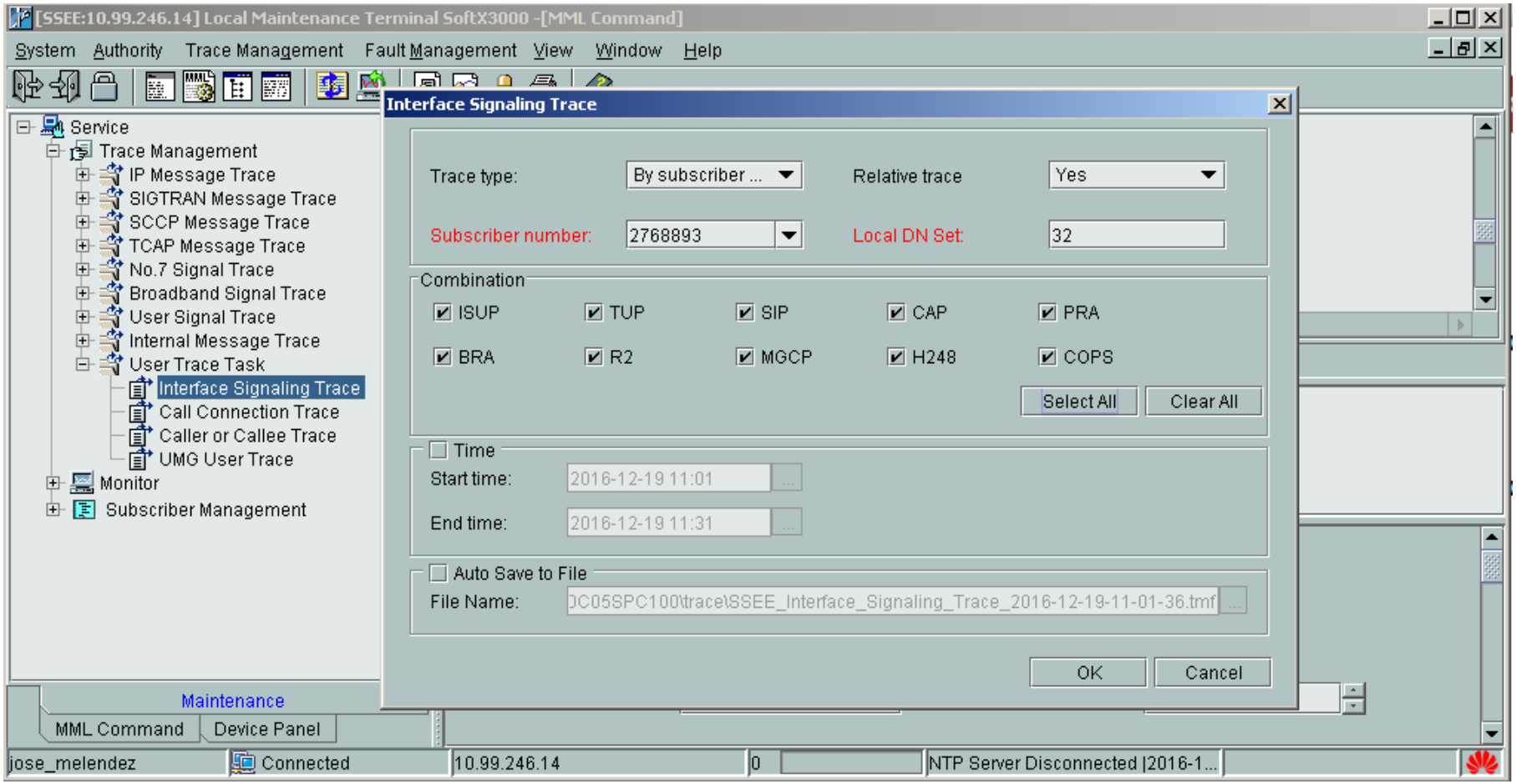
Trazas NGN : Linea IAD

Los datos de una linea que pertenece a un IAD viene dado por el parámetro «Subscriber Number» y «Local DN set».



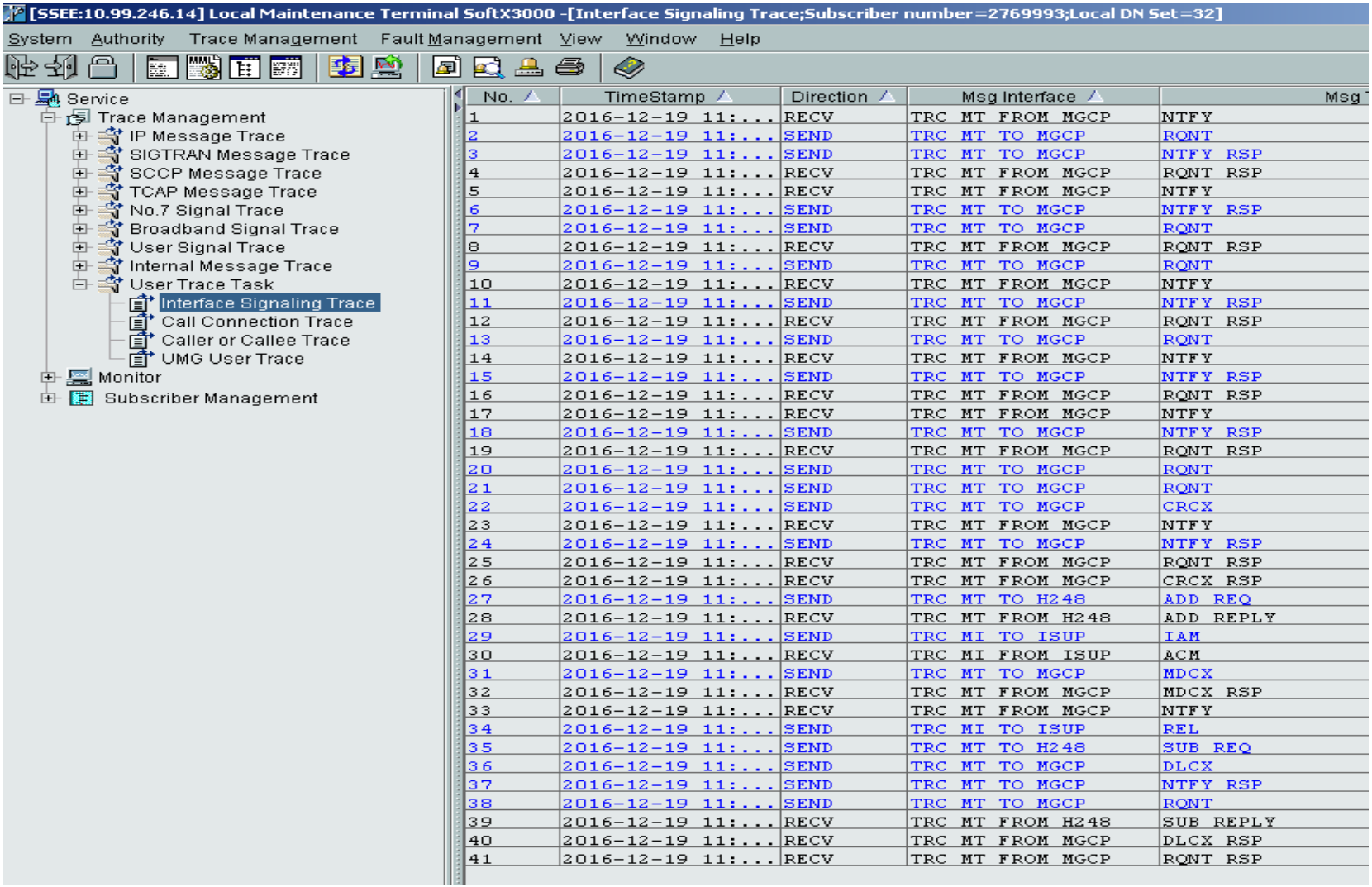
Trazas NGN : Linea IAD

Para abrir traza debemos abrir LMT lengüeta Maintenance y abrir árbol **Service->Trace Management->Interface Signalling Trace**. Se abre un Pop-Up en donde seleccionamos: Trace Type= «By subscriber»(, «Subscriber Number» numero de linea iad sin código area) y «Local DN Set»(código area), Select All. Y damos OK



Trazas NGN : Linea IAD

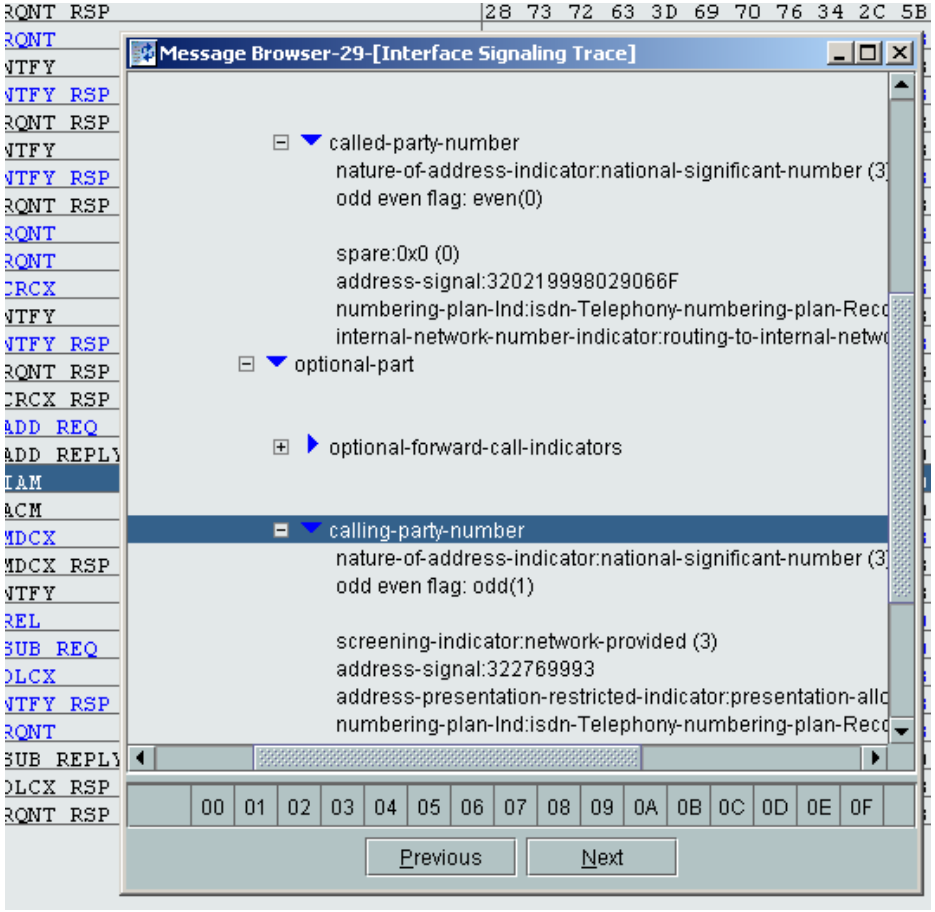
En este ejemplo la linea generó un llamado hacia PSTN, por lo tanto veremos dos protocolos MGCP e ISUP



No.	TimeStamp	Direction	Msg Interface	Msg
1	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
2	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
3	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
4	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
5	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
6	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
7	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
8	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
9	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
10	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
11	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
12	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
13	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
14	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
15	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
16	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
17	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
18	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
19	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
20	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
21	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
22	2016-12-19 11:...	SEND	TRC MT TO MGCP	CRCX
23	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
24	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
25	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP
26	2016-12-19 11:...	RECV	TRC MT FROM MGCP	CRCX RSP
27	2016-12-19 11:...	SEND	TRC MT TO H248	ADD REQ
28	2016-12-19 11:...	RECV	TRC MT FROM H248	ADD REPLY
29	2016-12-19 11:...	SEND	TRC MI TO ISUP	IAM
30	2016-12-19 11:...	RECV	TRC MI FROM ISUP	ACM
31	2016-12-19 11:...	SEND	TRC MT TO MGCP	MDCX
32	2016-12-19 11:...	RECV	TRC MT FROM MGCP	MDCX RSP
33	2016-12-19 11:...	RECV	TRC MT FROM MGCP	NTFY
34	2016-12-19 11:...	SEND	TRC MI TO ISUP	REL
35	2016-12-19 11:...	SEND	TRC MT TO H248	SUB REQ
36	2016-12-19 11:...	SEND	TRC MT TO MGCP	DLCX
37	2016-12-19 11:...	SEND	TRC MT TO MGCP	NTFY RSP
38	2016-12-19 11:...	SEND	TRC MT TO MGCP	RQNT
39	2016-12-19 11:...	RECV	TRC MT FROM H248	SUB REPLY
40	2016-12-19 11:...	RECV	TRC MT FROM MGCP	DLCX RSP
41	2016-12-19 11:...	RECV	TRC MT FROM MGCP	RQNT RSP

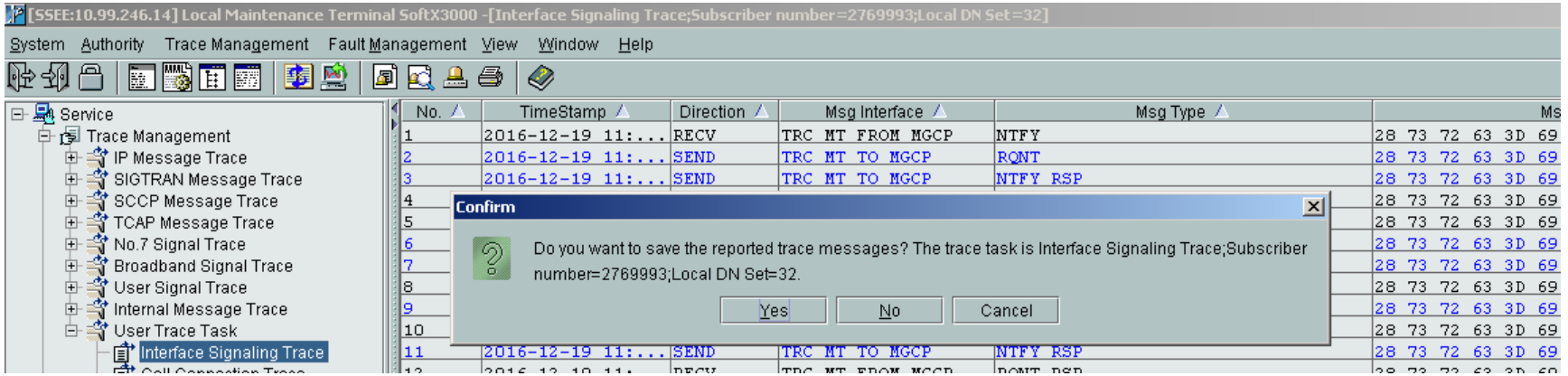
Trazas NGN : Linea IAD

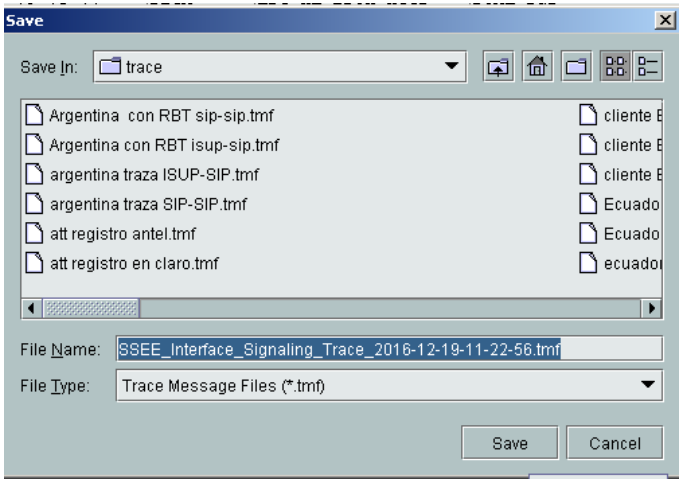
El mensaje en IAM en protocolo ISUP nos entrega los números de origen (calling party number) y de destino (called party number) del flujo de la llamada



Trazas NGN : Linea IAD

Para guardar la traza basta con cerrar la ventana de traza y aparece el pop-up, y quedará guardada esta en path que se elija o por defecto es C:\lmt\client\output\SoftX3000\SoftX3000 V300R010C05SPC100\trace



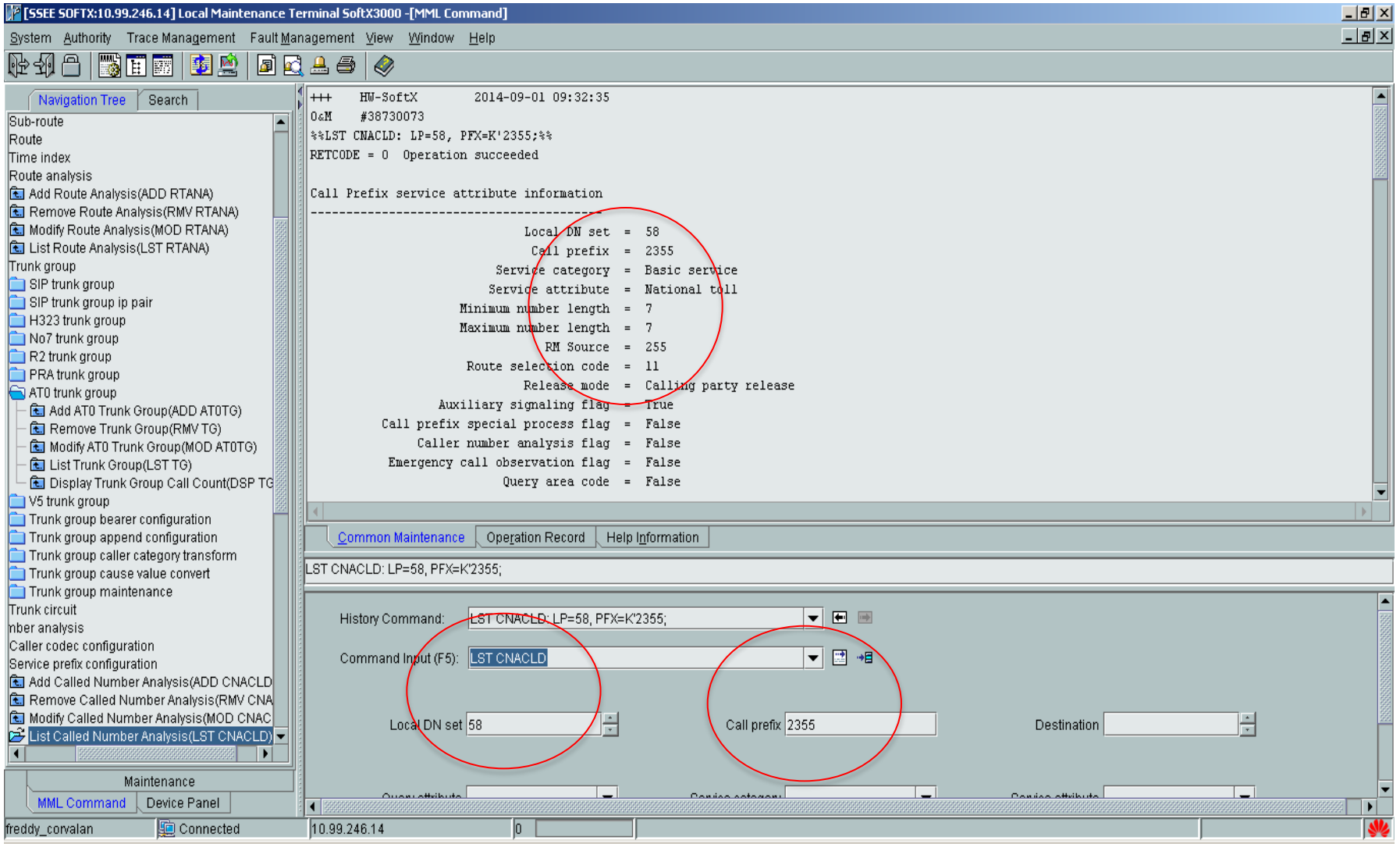


RUTAS PRI

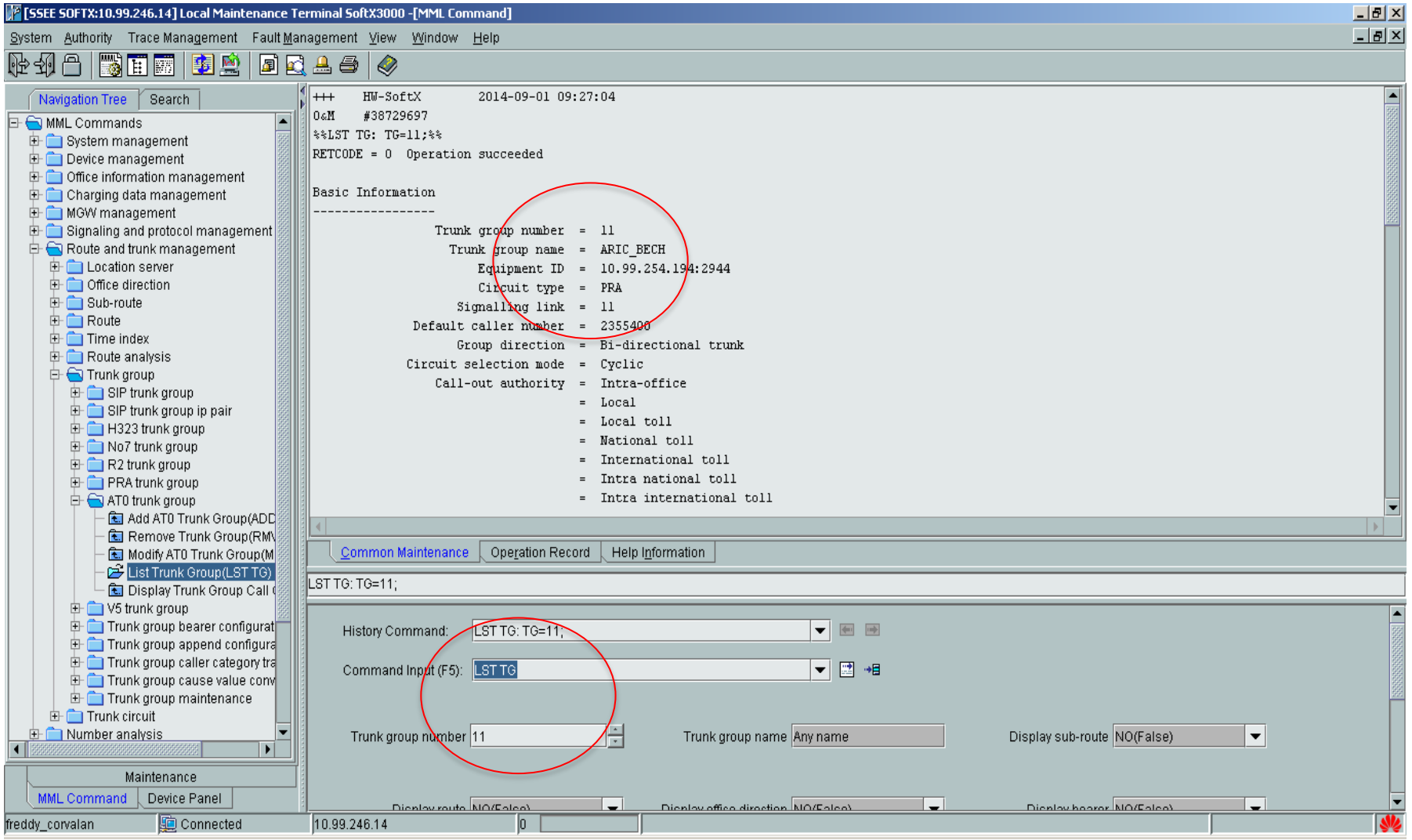
GENERALIDADES

- Como saber si es una ruta PRI
  - Tan simple como realizar un listado en el softx300 es posible certificar si es una ruta PRI.
- Las rutas PRI en la central NGN físicamente nacen desde un TMG o UMG.
  - TMG y UMG son equipos Media Gateway que convierten IP en TDM
- Poseen un DCHANNEL que en primera instancia nos indicará si la operatividad esta activa o no.
- Es posible monitorear y hacer una traza desde el softx3000.
- Cuando el ANI viene correcto

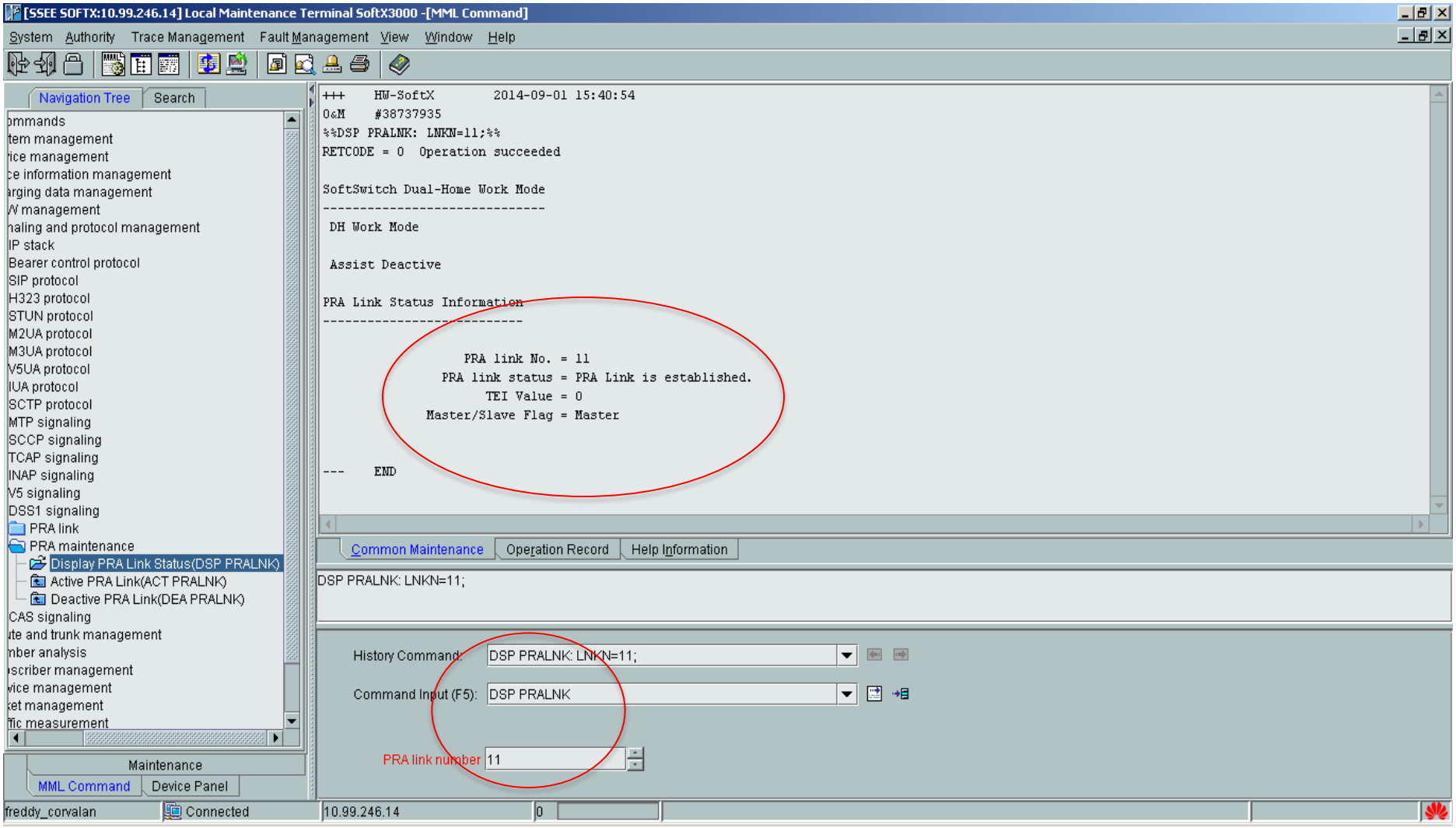
¿Como saber si lo reclamado por cliente es una ruta PRI?



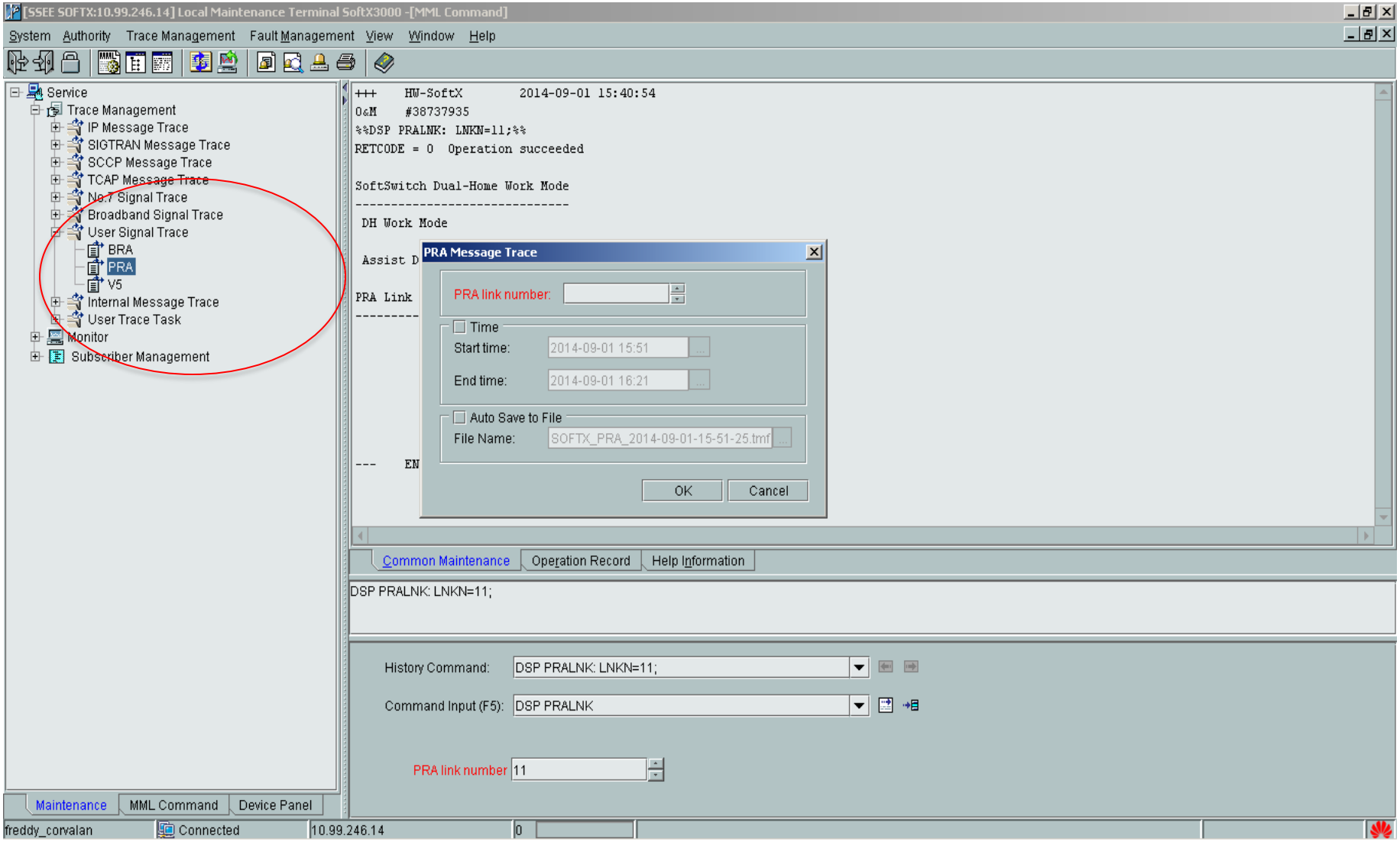
¿Como saber si lo reclamado por cliente es una ruta PRI?



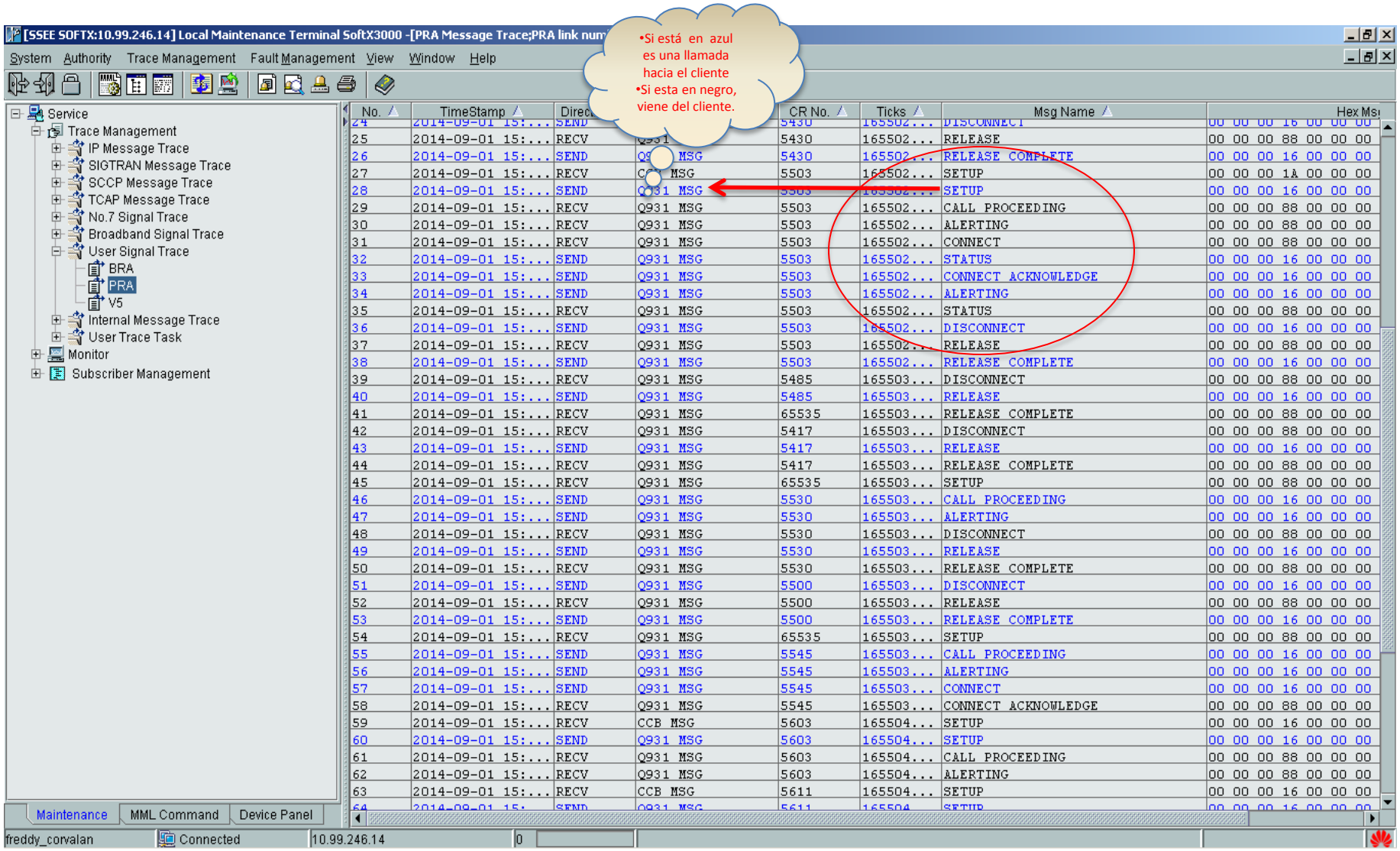
La importancia del DCHANNEL



Monitoreo y traza de una PRI

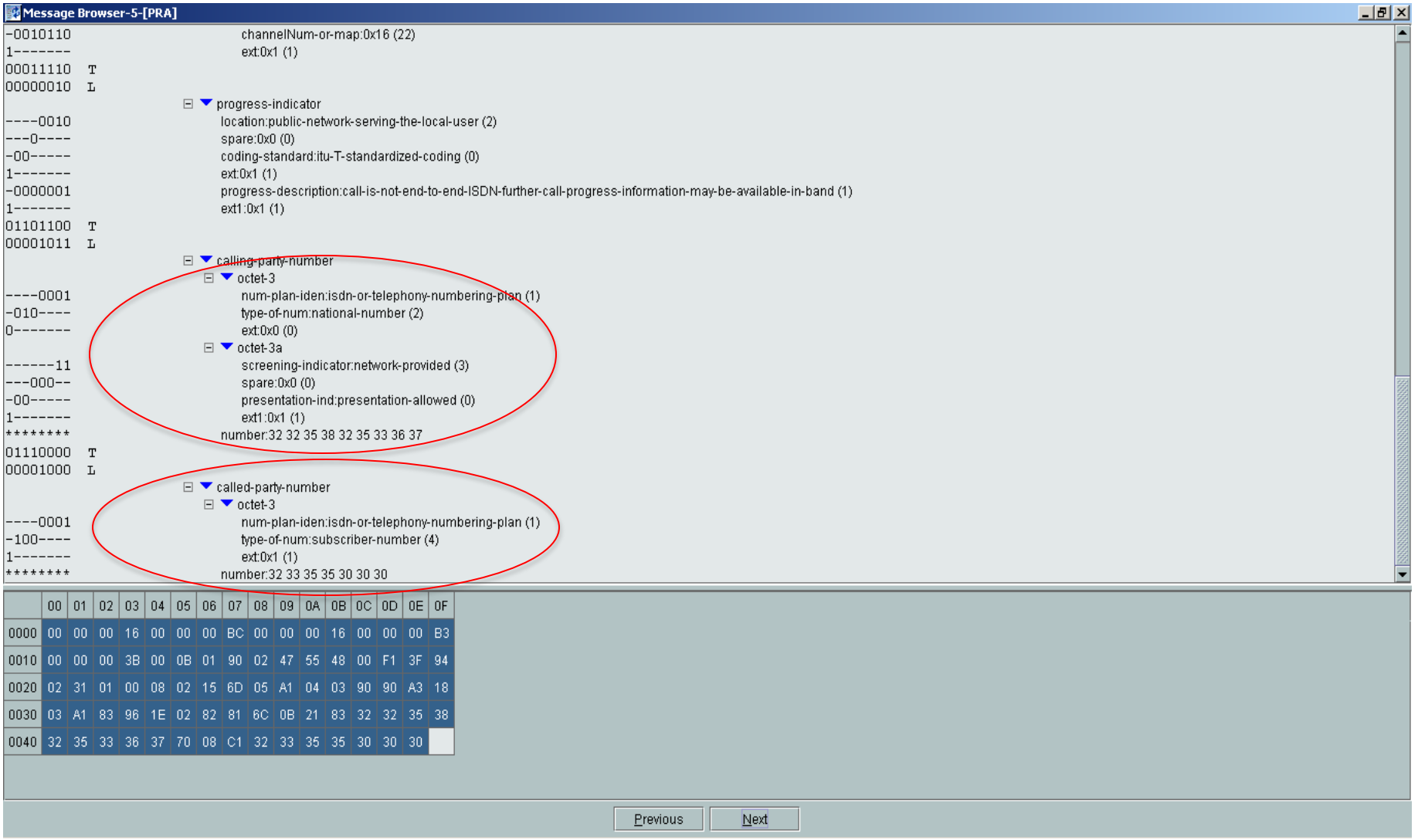


Monitoreo y traza de una PRI

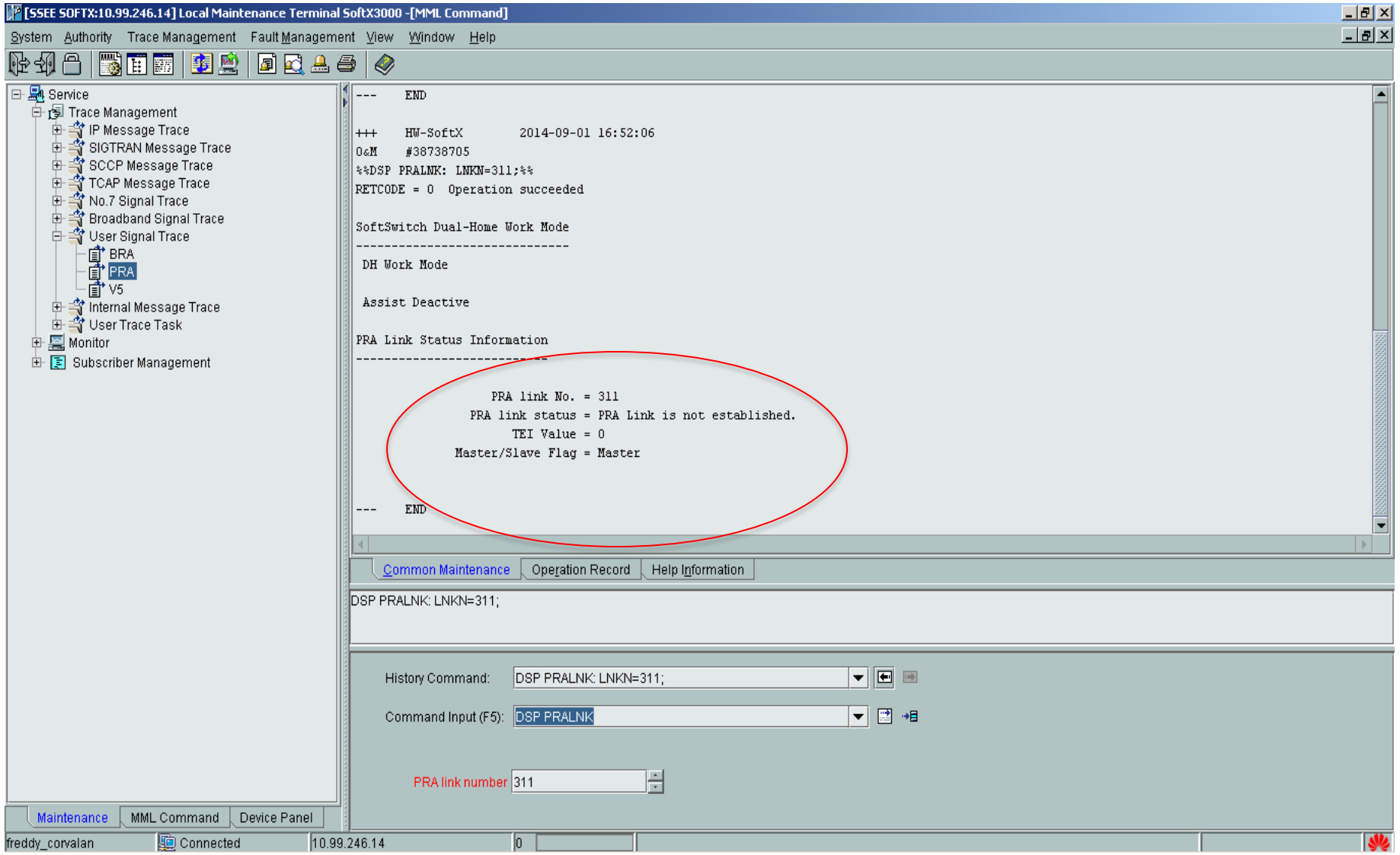


No.	TimeStamp	Direc		CR No.	Ticks	Msg Name	Hex Ms
25	2014-09-01 15:...	RECV	Q931	5430	165502...	RELEASE	00 00 00 88 00 00 00
26	2014-09-01 15:...	SEND	Q9 MSG	5430	165502...	RELEASE COMPLETE	00 00 00 16 00 00 00
27	2014-09-01 15:...	RECV	C MSG	5503	165502...	SETUP	00 00 00 1A 00 00 00
28	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	SETUP	00 00 00 16 00 00 00
29	2014-09-01 15:...	RECV	Q931 MSG	5503	165502...	CALL PROCEEDING	00 00 00 88 00 00 00
30	2014-09-01 15:...	RECV	Q931 MSG	5503	165502...	ALERTING	00 00 00 88 00 00 00
31	2014-09-01 15:...	RECV	Q931 MSG	5503	165502...	CONNECT	00 00 00 88 00 00 00
32	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	STATUS	00 00 00 16 00 00 00
33	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	CONNECT ACKNOWLEDGE	00 00 00 16 00 00 00
34	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	ALERTING	00 00 00 16 00 00 00
35	2014-09-01 15:...	RECV	Q931 MSG	5503	165502...	STATUS	00 00 00 88 00 00 00
36	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	DISCONNECT	00 00 00 16 00 00 00
37	2014-09-01 15:...	RECV	Q931 MSG	5503	165502...	RELEASE	00 00 00 88 00 00 00
38	2014-09-01 15:...	SEND	Q931 MSG	5503	165502...	RELEASE COMPLETE	00 00 00 16 00 00 00
39	2014-09-01 15:...	RECV	Q931 MSG	5485	165503...	DISCONNECT	00 00 00 88 00 00 00
40	2014-09-01 15:...	SEND	Q931 MSG	5485	165503...	RELEASE	00 00 00 16 00 00 00
41	2014-09-01 15:...	RECV	Q931 MSG	65535	165503...	RELEASE COMPLETE	00 00 00 88 00 00 00
42	2014-09-01 15:...	RECV	Q931 MSG	5417	165503...	DISCONNECT	00 00 00 88 00 00 00
43	2014-09-01 15:...	SEND	Q931 MSG	5417	165503...	RELEASE	00 00 00 16 00 00 00
44	2014-09-01 15:...	RECV	Q931 MSG	5417	165503...	RELEASE COMPLETE	00 00 00 88 00 00 00
45	2014-09-01 15:...	RECV	Q931 MSG	65535	165503...	SETUP	00 00 00 88 00 00 00
46	2014-09-01 15:...	SEND	Q931 MSG	5530	165503...	CALL PROCEEDING	00 00 00 16 00 00 00
47	2014-09-01 15:...	SEND	Q931 MSG	5530	165503...	ALERTING	00 00 00 16 00 00 00
48	2014-09-01 15:...	RECV	Q931 MSG	5530	165503...	DISCONNECT	00 00 00 88 00 00 00
49	2014-09-01 15:...	SEND	Q931 MSG	5530	165503...	RELEASE	00 00 00 16 00 00 00
50	2014-09-01 15:...	RECV	Q931 MSG	5530	165503...	RELEASE COMPLETE	00 00 00 88 00 00 00
51	2014-09-01 15:...	SEND	Q931 MSG	5500	165503...	DISCONNECT	00 00 00 16 00 00 00
52	2014-09-01 15:...	RECV	Q931 MSG	5500	165503...	RELEASE	00 00 00 88 00 00 00
53	2014-09-01 15:...	SEND	Q931 MSG	5500	165503...	RELEASE COMPLETE	00 00 00 16 00 00 00
54	2014-09-01 15:...	RECV	Q931 MSG	65535	165503...	SETUP	00 00 00 88 00 00 00
55	2014-09-01 15:...	SEND	Q931 MSG	5545	165503...	CALL PROCEEDING	00 00 00 16 00 00 00
56	2014-09-01 15:...	SEND	Q931 MSG	5545	165503...	ALERTING	00 00 00 16 00 00 00
57	2014-09-01 15:...	SEND	Q931 MSG	5545	165503...	CONNECT	00 00 00 16 00 00 00
58	2014-09-01 15:...	RECV	Q931 MSG	5545	165503...	CONNECT ACKNOWLEDGE	00 00 00 88 00 00 00
59	2014-09-01 15:...	RECV	CCB MSG	5603	165504...	SETUP	00 00 00 16 00 00 00
60	2014-09-01 15:...	SEND	Q931 MSG	5603	165504...	SETUP	00 00 00 16 00 00 00
61	2014-09-01 15:...	RECV	Q931 MSG	5603	165504...	CALL PROCEEDING	00 00 00 88 00 00 00
62	2014-09-01 15:...	RECV	Q931 MSG	5603	165504...	ALERTING	00 00 00 88 00 00 00
63	2014-09-01 15:...	RECV	CCB MSG	5611	165504...	SETUP	00 00 00 16 00 00 00

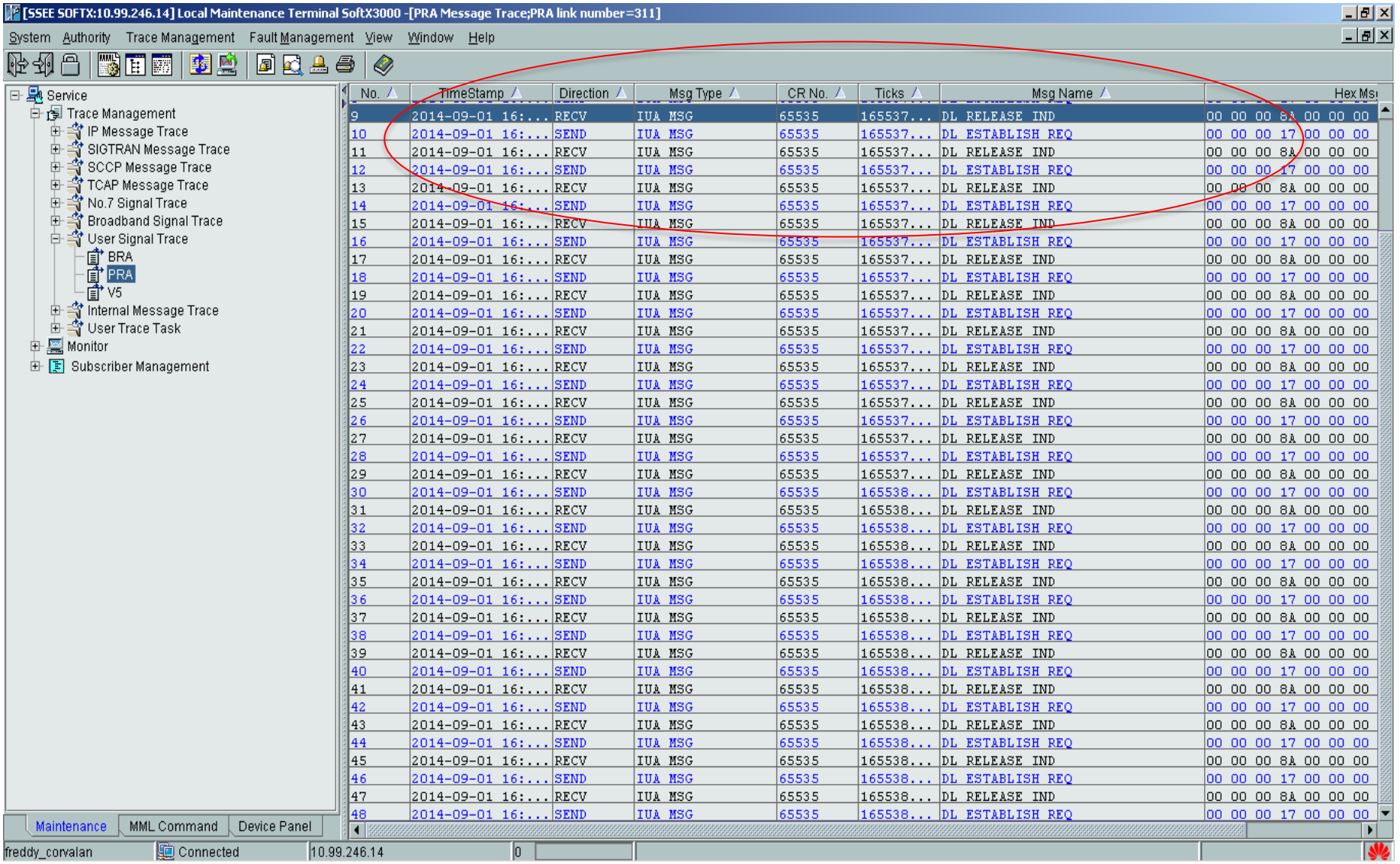
Monitoreo y traza de una PRI



Monitoreo y traza de una PRI

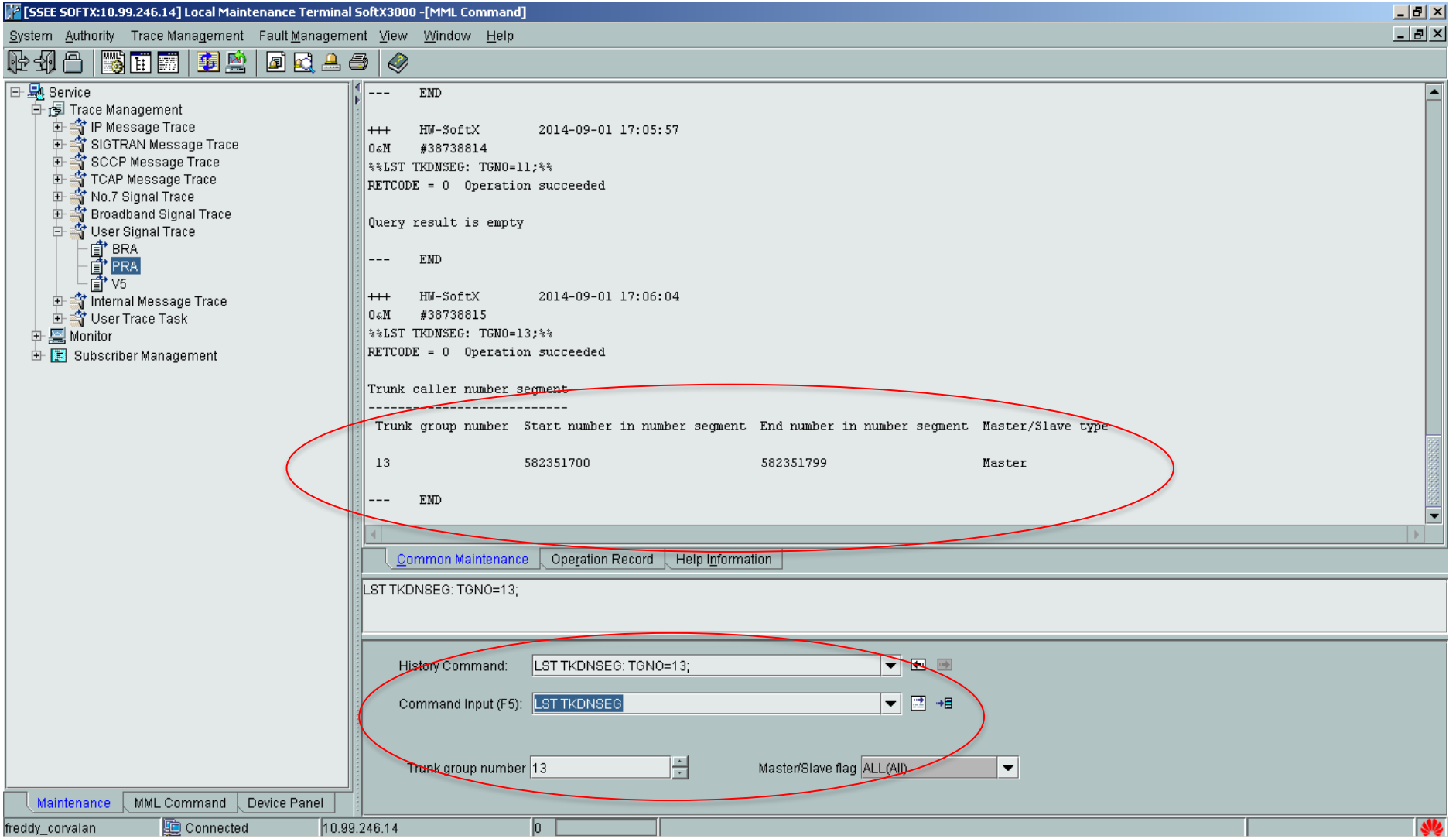


Monitoreo y traza de una PRI

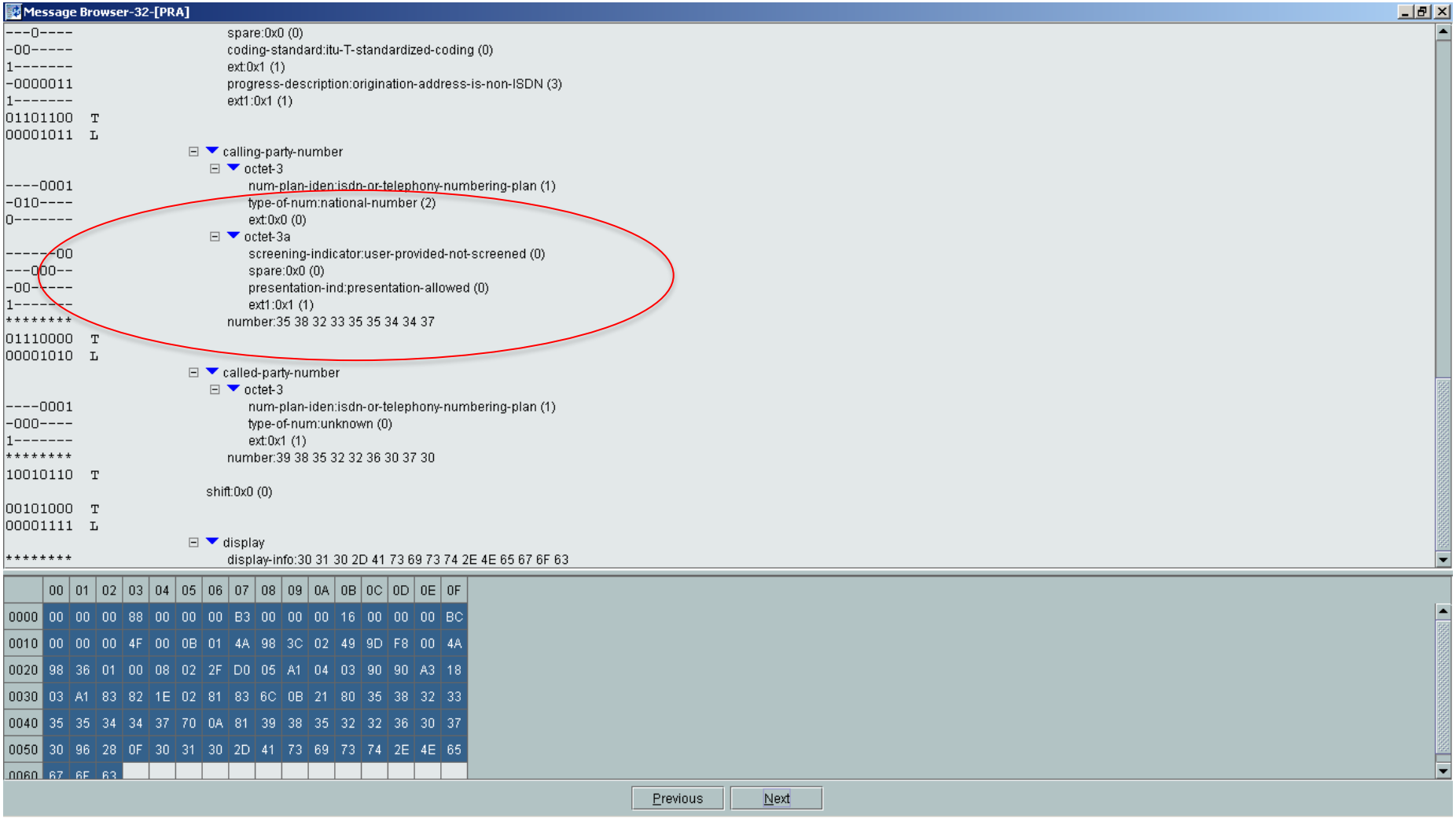


No.	TimeStamp	Direction	Msg Type	CR No.	Ticks	Msg Name	Hex Ms
9	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
10	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
11	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
12	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
13	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
14	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
15	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
16	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
17	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
18	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
19	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
20	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
21	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
22	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
23	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
24	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
25	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
26	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
27	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
28	2014-09-01 16:...	SEND	IUA MSG	65535	165537...	DL ESTABLISH REQ	00 00 00 17 00 00 00
29	2014-09-01 16:...	RECV	IUA MSG	65535	165537...	DL RELEASE IND	00 00 00 8A 00 00 00
30	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
31	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
32	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
33	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
34	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
35	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
36	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
37	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
38	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
39	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
40	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
41	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
42	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
43	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
44	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
45	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
46	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00
47	2014-09-01 16:...	RECV	IUA MSG	65535	165538...	DL RELEASE IND	00 00 00 8A 00 00 00
48	2014-09-01 16:...	SEND	IUA MSG	65535	165538...	DL ESTABLISH REQ	00 00 00 17 00 00 00

Verificar ANI correcto

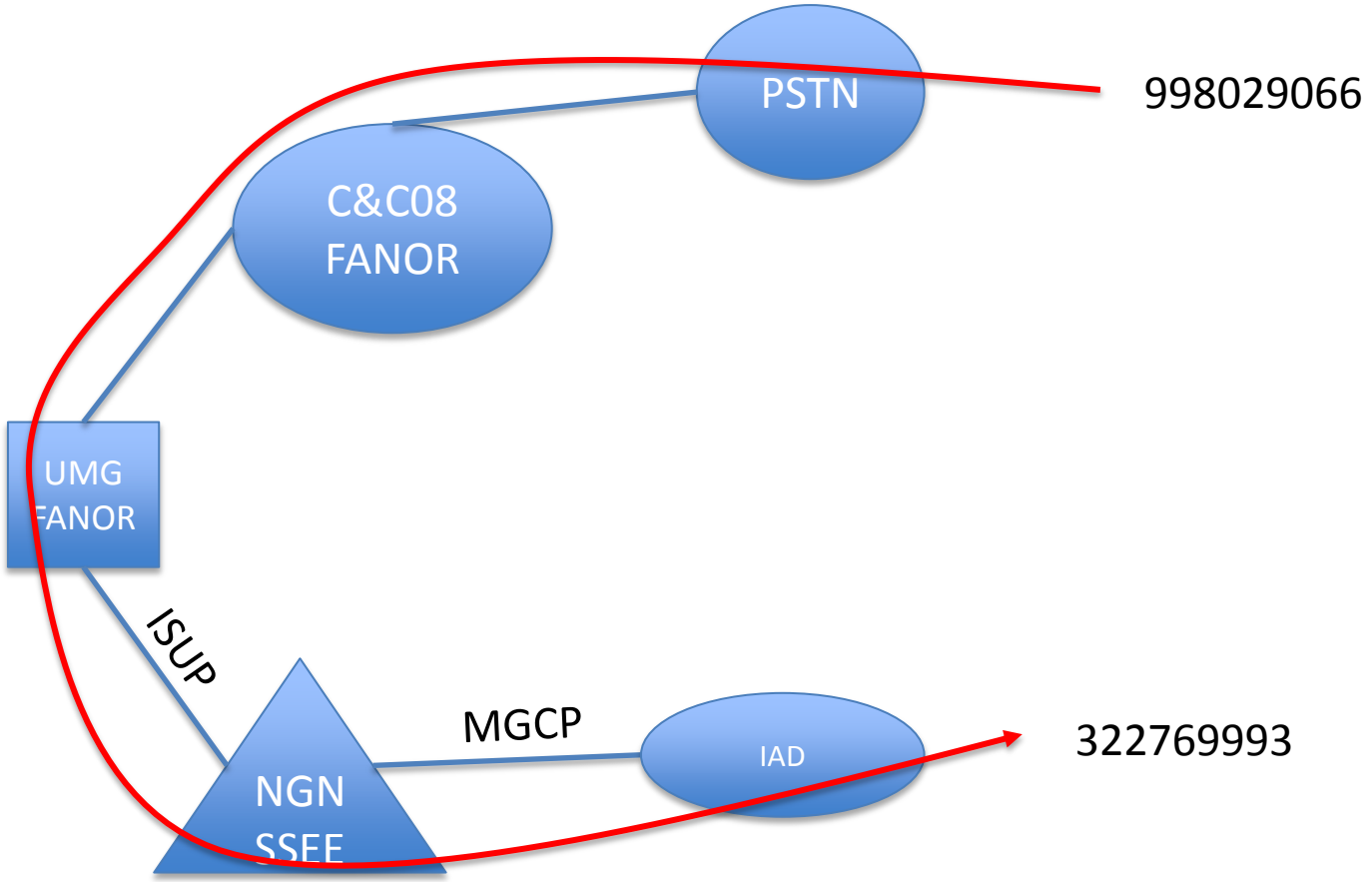


Verificar ANI correcto



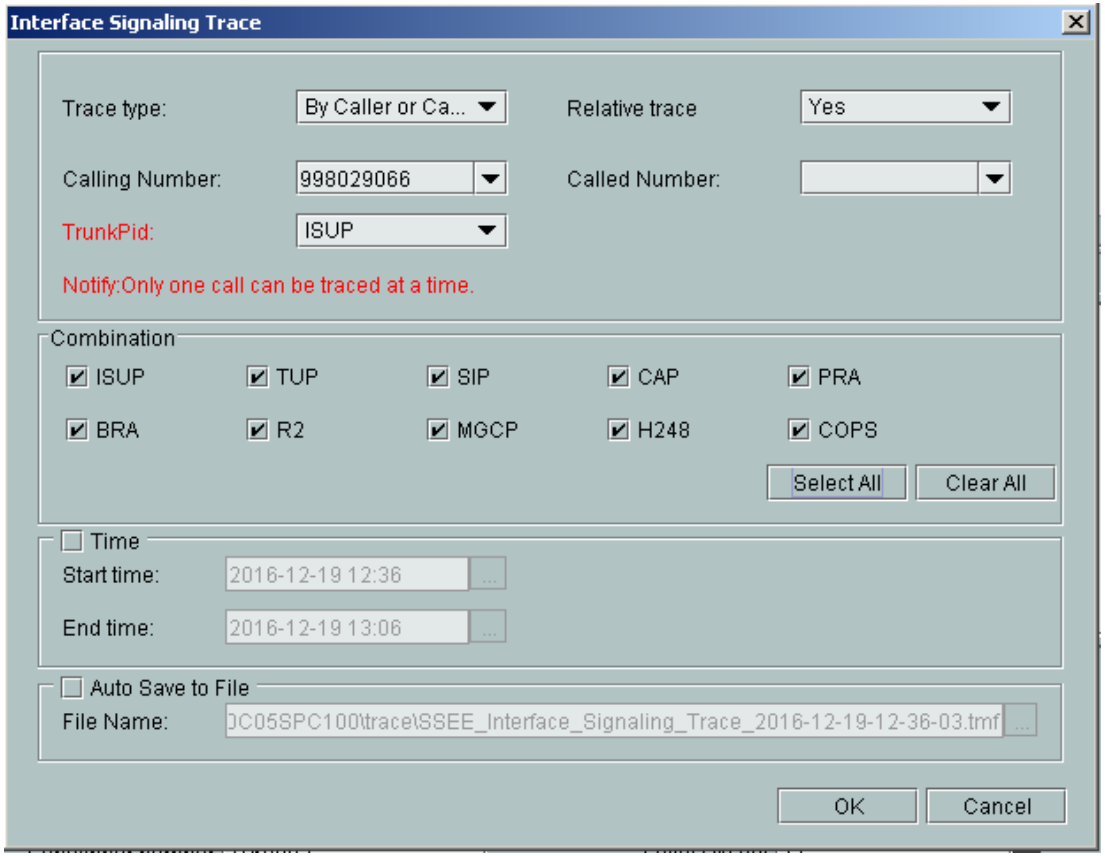
Trazas NGN : Por Calling Number

Este caso se dá cuando queremos saber si está entrando una llamada desde la PSTN hacia un cliente SSEE, ya sea troncal o iad. Ej.: nuestro origen es un teléfono móvil (998029066) ingresando a una linea iad (322769993).



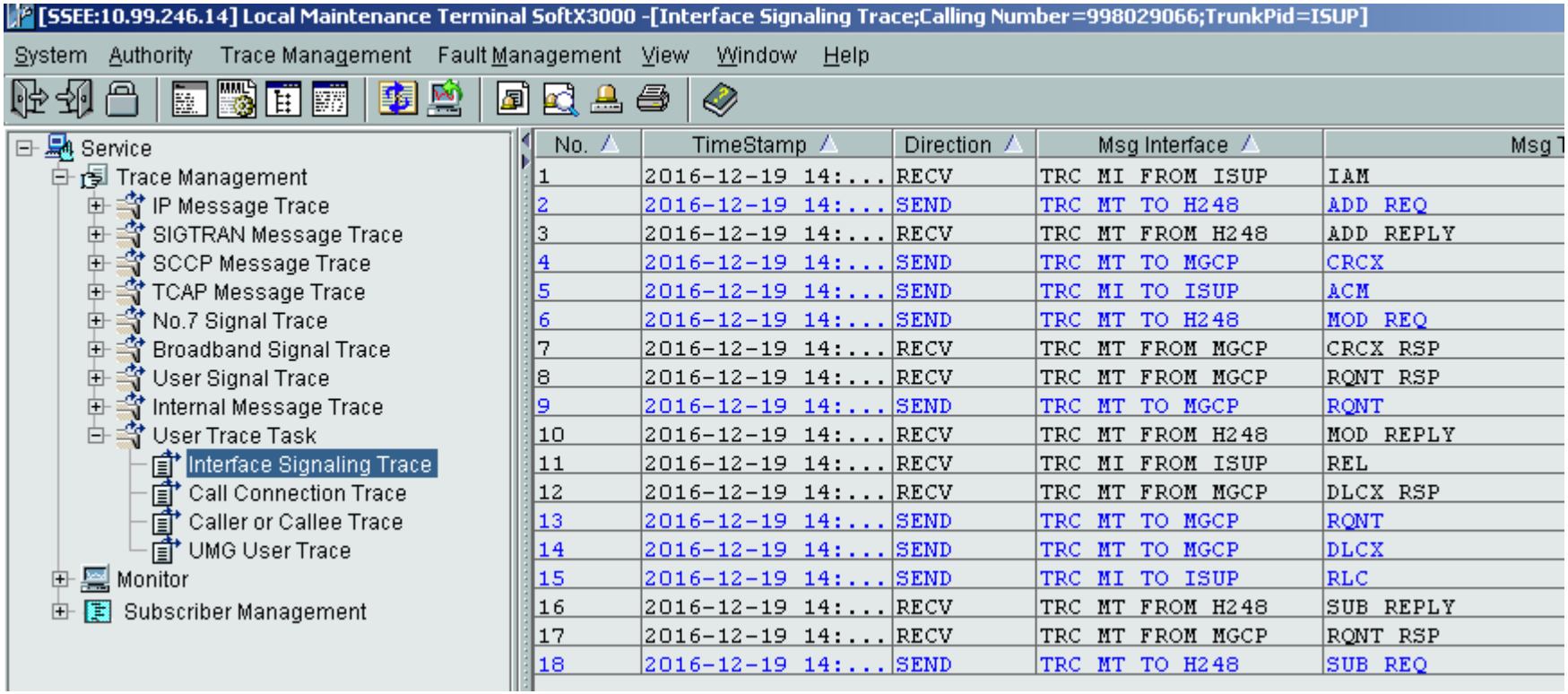
Trazas NGN : Por Calling Number

Para abrir traza debemos abrir LMT lengüeta Maintenance y abrir árbol **Service->Trace Management->Interface Signalling Trace**. Se abre un Pop-Up en donde seleccionamos: Trace Type= «By Caller or Callee», «Calling Number» (numero de origen de PSTN, Select All. Y damos OK



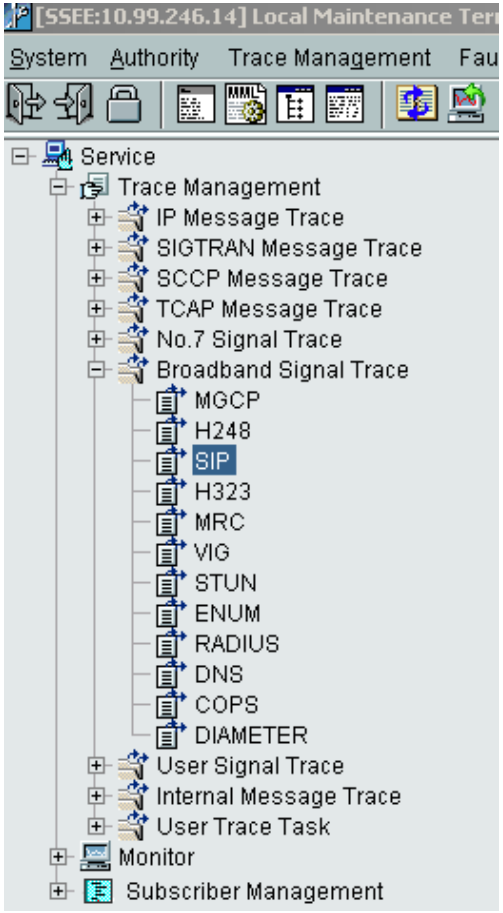
Trazas NGN : Por Calling Number

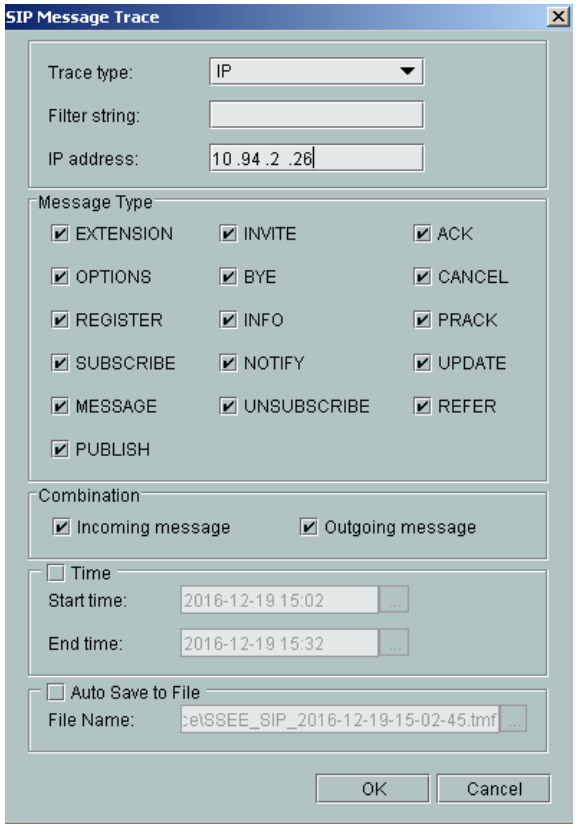
Esta es una traza tipo desde PSTN hacia una iad, se tienen dos protocolos: ISUP y MGCP. Si tuviésemos como punto final un enlace SIP, la traza sería ISUP-SIP, y si fuese PRA la traza sería ISUP-PRA



Trazas NGN : Por ruta SIP

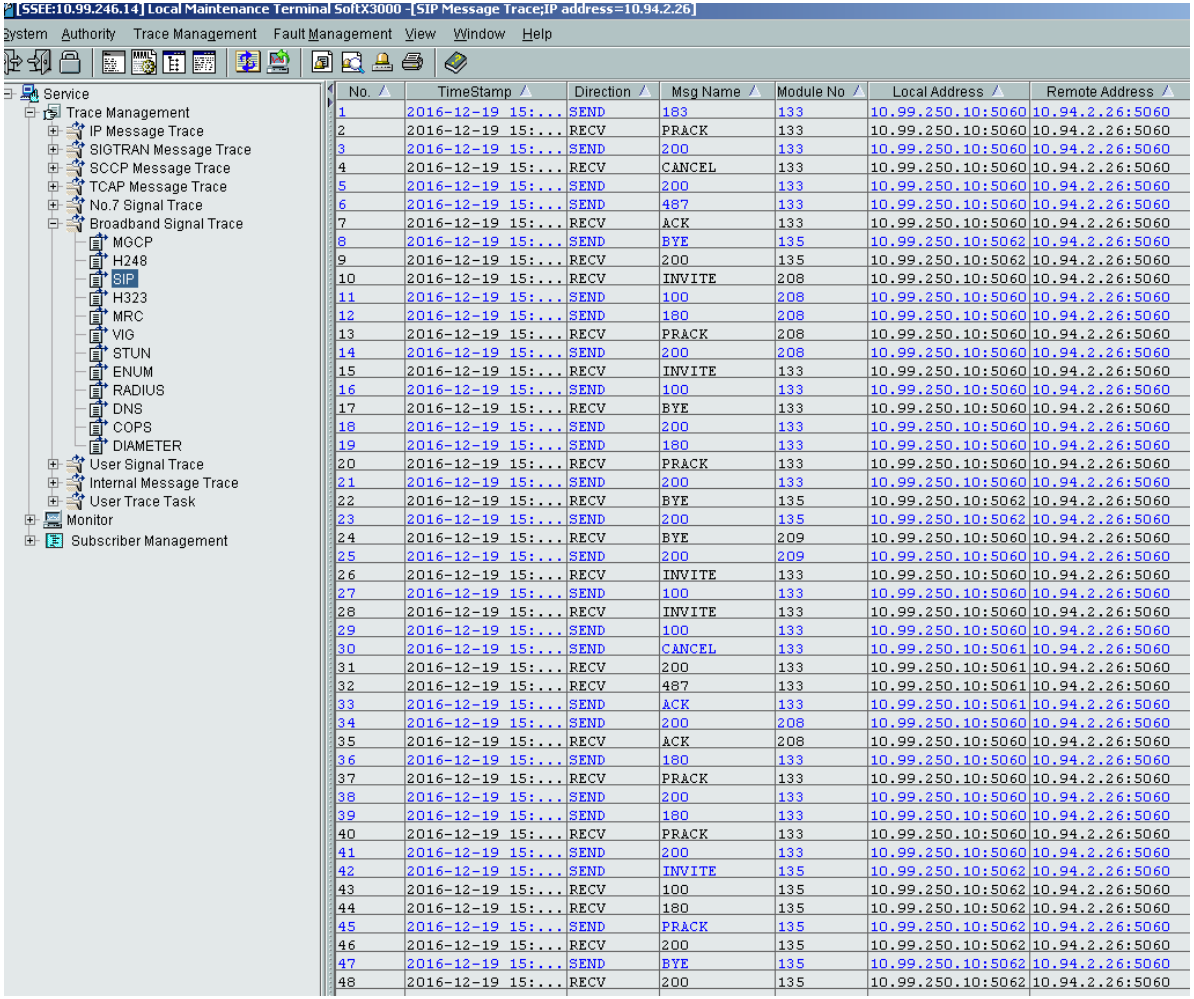
Si conocemos la ruta SIP y su IP, es posible obtener la traza de troncal SIP ubicada en la lengüeta Maintenance y abrir árbol **Service->Trace Management->Broadband Signal Trace->SIP**. Se abre un Pop-Up en donde ingresamos el IP address de la ruta SIP. Y damos OK





Trazas NGN : Por ruta SIP

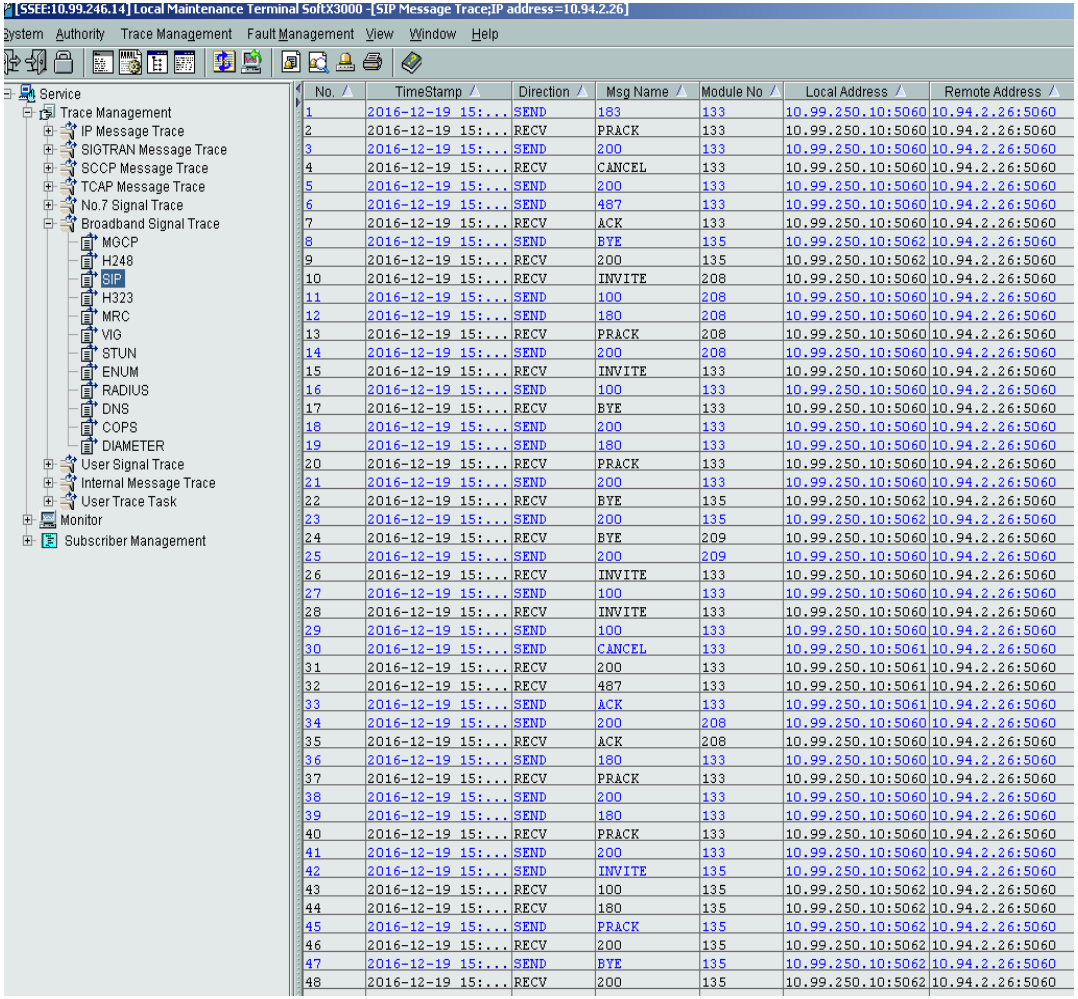
Esta traza permite visualizar todos los mensajes SIP de los flujos de llamados entrantes y salientes de la troncal,. En la columna Direction podemos apreciar el sentido del mensaje, este puede ser: SEND (desde NGN a PBX) o RECV (desde PBX a NGN)



No.	TimeStamp	Direction	Msg Name	Module No	Local Address	Remote Address
1	2016-12-19 15:...	SEND	183	133	10.99.250.10:5060	10.94.2.26:5060
2	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
3	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
4	2016-12-19 15:...	RECV	CANCEL	133	10.99.250.10:5060	10.94.2.26:5060
5	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
6	2016-12-19 15:...	SEND	487	133	10.99.250.10:5060	10.94.2.26:5060
7	2016-12-19 15:...	RECV	ACK	133	10.99.250.10:5060	10.94.2.26:5060
8	2016-12-19 15:...	SEND	BYE	135	10.99.250.10:5062	10.94.2.26:5060
9	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060
10	2016-12-19 15:...	RECV	INVITE	208	10.99.250.10:5060	10.94.2.26:5060
11	2016-12-19 15:...	SEND	100	208	10.99.250.10:5060	10.94.2.26:5060
12	2016-12-19 15:...	SEND	180	208	10.99.250.10:5060	10.94.2.26:5060
13	2016-12-19 15:...	RECV	PRACK	208	10.99.250.10:5060	10.94.2.26:5060
14	2016-12-19 15:...	SEND	200	208	10.99.250.10:5060	10.94.2.26:5060
15	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
16	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
17	2016-12-19 15:...	RECV	BYE	133	10.99.250.10:5060	10.94.2.26:5060
18	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
19	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
20	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
21	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
22	2016-12-19 15:...	RECV	BYE	135	10.99.250.10:5062	10.94.2.26:5060
23	2016-12-19 15:...	SEND	200	135	10.99.250.10:5062	10.94.2.26:5060
24	2016-12-19 15:...	RECV	BYE	209	10.99.250.10:5060	10.94.2.26:5060
25	2016-12-19 15:...	SEND	200	209	10.99.250.10:5060	10.94.2.26:5060
26	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
27	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
28	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
29	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
30	2016-12-19 15:...	SEND	CANCEL	133	10.99.250.10:5061	10.94.2.26:5060
31	2016-12-19 15:...	RECV	200	133	10.99.250.10:5061	10.94.2.26:5060
32	2016-12-19 15:...	RECV	487	133	10.99.250.10:5061	10.94.2.26:5060
33	2016-12-19 15:...	SEND	ACK	133	10.99.250.10:5061	10.94.2.26:5060
34	2016-12-19 15:...	SEND	200	208	10.99.250.10:5060	10.94.2.26:5060
35	2016-12-19 15:...	RECV	ACK	208	10.99.250.10:5060	10.94.2.26:5060
36	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
37	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
38	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
39	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
40	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
41	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
42	2016-12-19 15:...	SEND	INVITE	135	10.99.250.10:5062	10.94.2.26:5060
43	2016-12-19 15:...	RECV	100	135	10.99.250.10:5062	10.94.2.26:5060
44	2016-12-19 15:...	RECV	180	135	10.99.250.10:5062	10.94.2.26:5060
45	2016-12-19 15:...	SEND	PRACK	135	10.99.250.10:5062	10.94.2.26:5060
46	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060
47	2016-12-19 15:...	SEND	BYE	135	10.99.250.10:5062	10.94.2.26:5060
48	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060

Trazas NGN : Por ruta SIP

El mensaje INVITE es el mensaje de inicio de una llamada, indica el numero de origen y destino, como IP de origen y destino respectivamente.



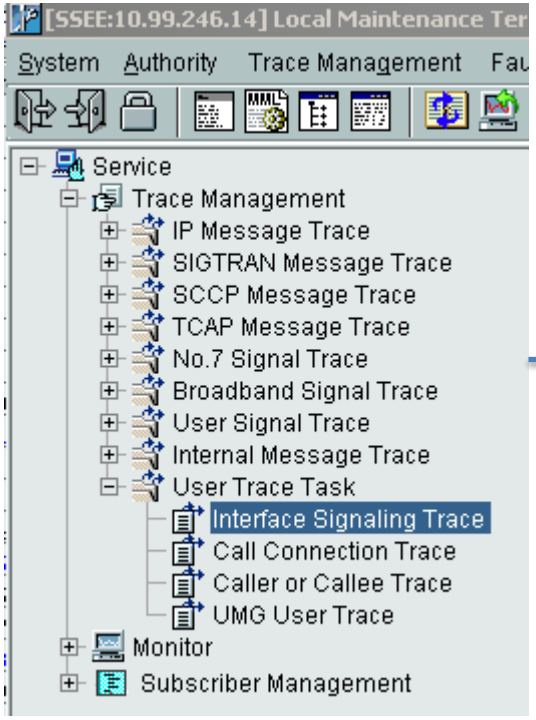
No.	TimeStamp	Direction	Msg Name	Module No	Local Address	Remote Address
1	2016-12-19 15:...	SEND	183	133	10.99.250.10:5060	10.94.2.26:5060
2	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
3	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
4	2016-12-19 15:...	RECV	CANCEL	133	10.99.250.10:5060	10.94.2.26:5060
5	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
6	2016-12-19 15:...	SEND	487	133	10.99.250.10:5060	10.94.2.26:5060
7	2016-12-19 15:...	RECV	ACK	133	10.99.250.10:5060	10.94.2.26:5060
8	2016-12-19 15:...	SEND	BYE	135	10.99.250.10:5062	10.94.2.26:5060
9	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060
10	2016-12-19 15:...	RECV	INVITE	208	10.99.250.10:5060	10.94.2.26:5060
11	2016-12-19 15:...	SEND	100	208	10.99.250.10:5060	10.94.2.26:5060
12	2016-12-19 15:...	SEND	180	208	10.99.250.10:5060	10.94.2.26:5060
13	2016-12-19 15:...	RECV	PRACK	208	10.99.250.10:5060	10.94.2.26:5060
14	2016-12-19 15:...	SEND	200	208	10.99.250.10:5060	10.94.2.26:5060
15	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
16	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
17	2016-12-19 15:...	RECV	BYE	133	10.99.250.10:5060	10.94.2.26:5060
18	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
19	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
20	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
21	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
22	2016-12-19 15:...	RECV	BYE	135	10.99.250.10:5062	10.94.2.26:5060
23	2016-12-19 15:...	SEND	200	135	10.99.250.10:5062	10.94.2.26:5060
24	2016-12-19 15:...	RECV	BYE	209	10.99.250.10:5060	10.94.2.26:5060
25	2016-12-19 15:...	SEND	200	209	10.99.250.10:5060	10.94.2.26:5060
26	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
27	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
28	2016-12-19 15:...	RECV	INVITE	133	10.99.250.10:5060	10.94.2.26:5060
29	2016-12-19 15:...	SEND	100	133	10.99.250.10:5060	10.94.2.26:5060
30	2016-12-19 15:...	SEND	CANCEL	133	10.99.250.10:5061	10.94.2.26:5060
31	2016-12-19 15:...	RECV	200	133	10.99.250.10:5061	10.94.2.26:5060
32	2016-12-19 15:...	RECV	487	133	10.99.250.10:5061	10.94.2.26:5060
33	2016-12-19 15:...	SEND	ACK	133	10.99.250.10:5061	10.94.2.26:5060
34	2016-12-19 15:...	SEND	200	208	10.99.250.10:5060	10.94.2.26:5060
35	2016-12-19 15:...	RECV	ACK	208	10.99.250.10:5060	10.94.2.26:5060
36	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
37	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
38	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
39	2016-12-19 15:...	SEND	180	133	10.99.250.10:5060	10.94.2.26:5060
40	2016-12-19 15:...	RECV	PRACK	133	10.99.250.10:5060	10.94.2.26:5060
41	2016-12-19 15:...	SEND	200	133	10.99.250.10:5060	10.94.2.26:5060
42	2016-12-19 15:...	SEND	INVITE	135	10.99.250.10:5062	10.94.2.26:5060
43	2016-12-19 15:...	RECV	100	135	10.99.250.10:5062	10.94.2.26:5060
44	2016-12-19 15:...	RECV	180	135	10.99.250.10:5062	10.94.2.26:5060
45	2016-12-19 15:...	SEND	PRACK	135	10.99.250.10:5062	10.94.2.26:5060
46	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060
47	2016-12-19 15:...	SEND	BYE	135	10.99.250.10:5062	10.94.2.26:5060
48	2016-12-19 15:...	RECV	200	135	10.99.250.10:5062	10.94.2.26:5060

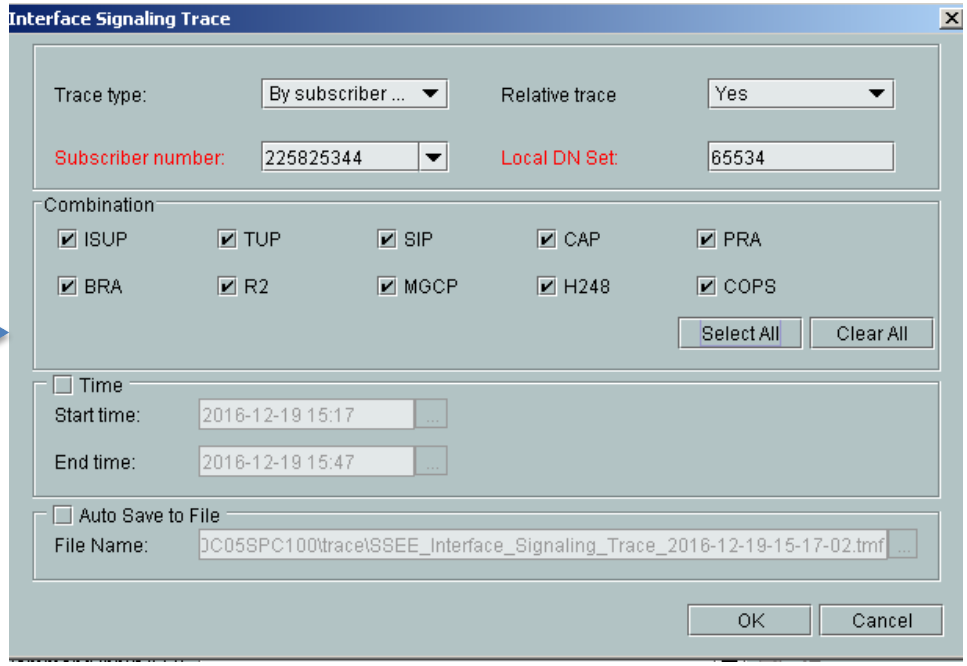
```
INVITE sip:9942164136@10.99.250.10:5060 SIP/2.0
Via: SIP/2.0/UDP 10.94.2.26:5060;branch=z9hG4bKepltfn005oegdt44s271.1
Remote-Party-ID: "Francisca Perez"
<sip:225810029@10.39.145.4>;party=calling;screen=yes;privacy=off
From: "Francisca Perez" <sip:225810029@10.94.2.26:5060>;tag=901D7F40-1305
To: <sip:9942164136@10.99.250.10:5060>
Date: Mon, 19 Dec 2016 18:07:28 GMT
Call-ID: D630B489-C54C11E6-978BFE60-83FBB16F@10.39.145.4
Supported: 100rel,timer,resource-priority,replaces,sdp-anat
Min-SE: 1800
Cisco-Guid: 4281562496-0000065536-0000050142-0261170954
User-Agent: Cisco-SIPGateway/IOS-12.x
Allow: INVITE, OPTIONS, BYE, CANCEL, ACK, PRACK, UPDATE, REFER, SUBSCRIBE, NOTIFY, INFO,
REGISTER
CSeq: 101 INVITE
Timestamp: 1482170848
Contact: <sip:225810029@10.94.2.26:5060;transport=udp>
Expires: 180
Allow-Events: telephone-event
Max-Forwards: 68
Session-Expires: 1800
Content-Type: application/sdp
Content-Disposition: session;handling=required
Content-Length: 303

v=0
o=CiscoSystemsSIP-GW-UserAgent 6593 3563 IN IP4 10.94.2.26
s=SIP Call
c=IN IP4 10.94.2.26
t=0 0
m=audio 34710 RTP/AVP 8 4 18 0 101
c=IN IP4 10.94.2.26
a=rtpmap:8 PCMA/8000
a=rtpmap:4 G723/8000
a=rtpmap:18 G729/8000
a=rtpmap:0 PCMU/8000
a=rtpmap:101 telephone-event/8000
a=fmtp:101 0-15
```

Trazas NGN : Traza por numero de origen ruta SIP

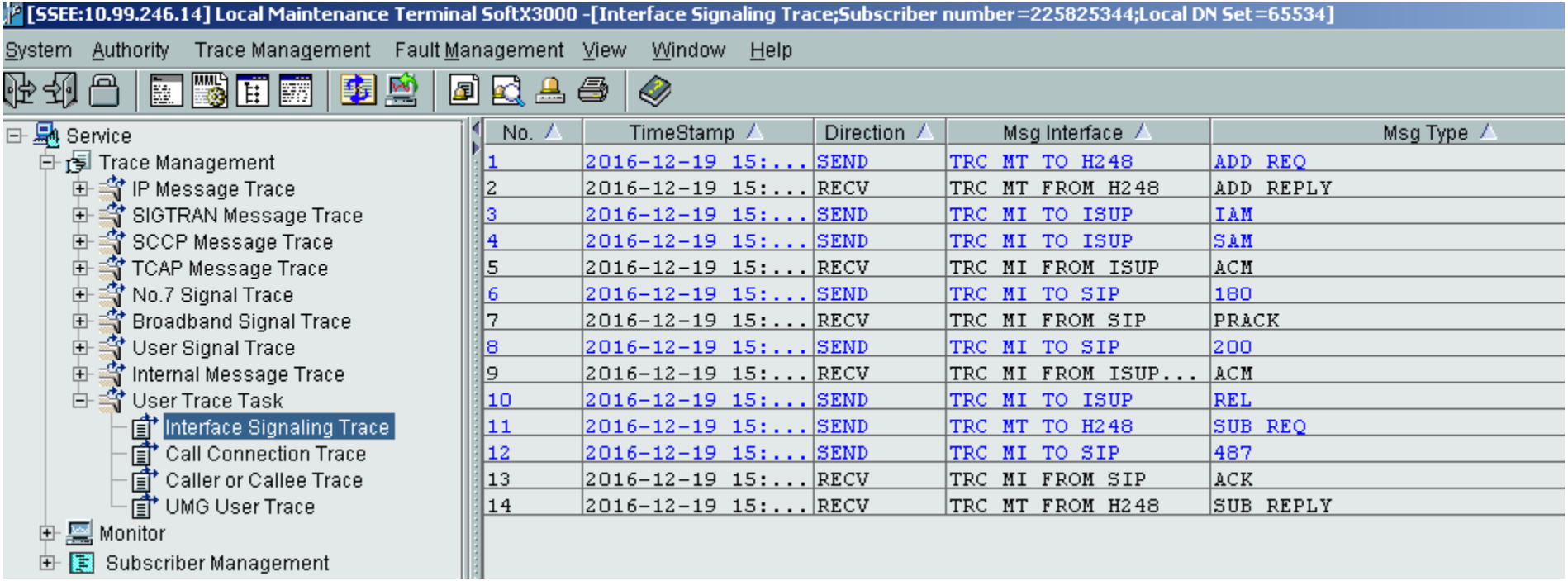
Si conozco el numero de origen que viene por una ruta SIP, ejemplo: 225825344 de TG SIP 2192, IP 10.94.2.26. Entonces no dirigimos a lengüeta Maintenance y abrir árbol **Service->Trace Management->Interface Signalling Trace**. Se abre un Pop-Up en donde seleccionamos: Trace Type= «By subscriber»(, «Subscriber Number» numero de origen a 9 digitos que viene de PBX) y «Local DN Set»(65534), Select All. Y damos OK





Trazas NGN : Traza por numero de origen ruta SIP

Esta traza nos permite tener una visión del tránsito de una llamada SIP, hacia algun otro protocolo, en este caso el destino es ISUP. Pero podría ser MGCP, PRA, o SIP.



No.	TimeStamp	Direction	Msg Interface	Msg Type
1	2016-12-19 15:...	SEND	TRC MT TO H248	ADD REQ
2	2016-12-19 15:...	RECV	TRC MT FROM H248	ADD REPLY
3	2016-12-19 15:...	SEND	TRC MI TO ISUP	IAM
4	2016-12-19 15:...	SEND	TRC MI TO ISUP	SAM
5	2016-12-19 15:...	RECV	TRC MI FROM ISUP	ACM
6	2016-12-19 15:...	SEND	TRC MI TO SIP	180
7	2016-12-19 15:...	RECV	TRC MI FROM SIP	PRACK
8	2016-12-19 15:...	SEND	TRC MI TO SIP	200
9	2016-12-19 15:...	RECV	TRC MI FROM ISUP...	ACM
10	2016-12-19 15:...	SEND	TRC MI TO ISUP	REL
11	2016-12-19 15:...	SEND	TRC MT TO H248	SUB REQ
12	2016-12-19 15:...	SEND	TRC MI TO SIP	487
13	2016-12-19 15:...	RECV	TRC MI FROM SIP	ACK
14	2016-12-19 15:...	RECV	TRC MT FROM H248	SUB REPLY