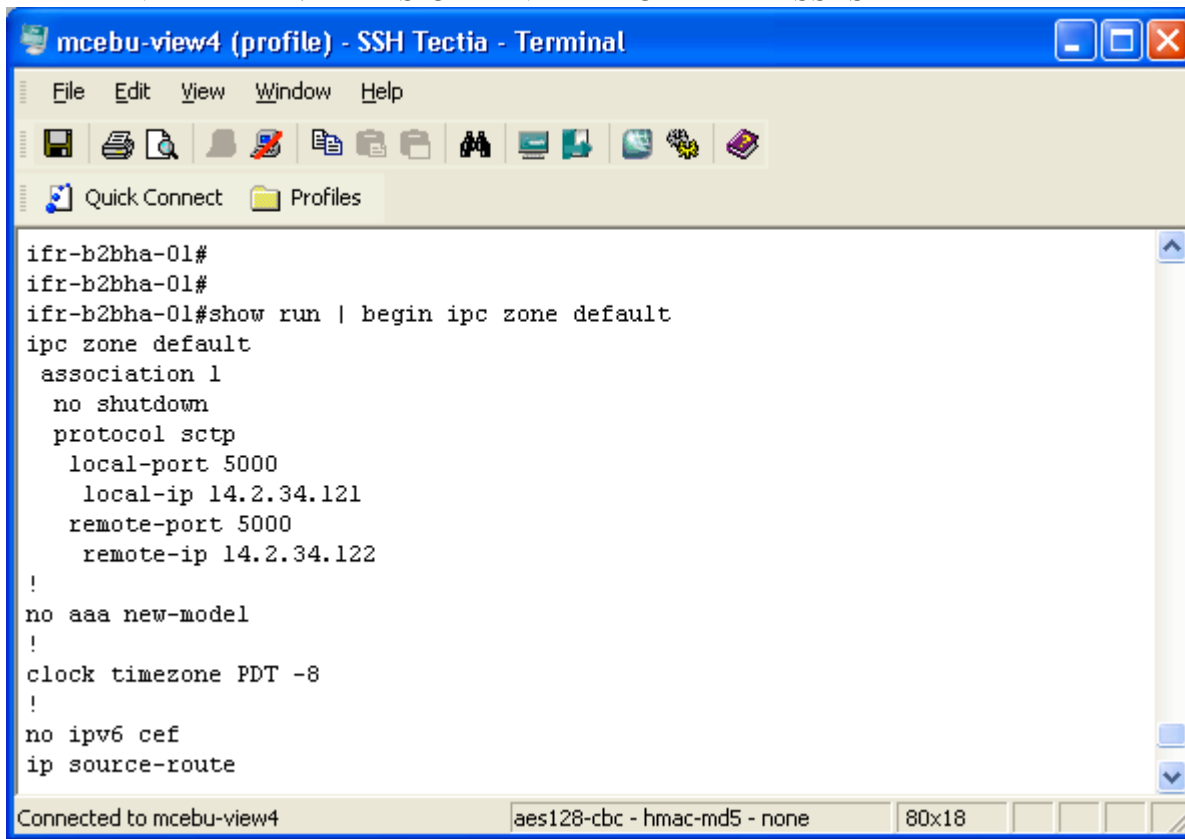


VOICE B2B HA CONFIGURATION SCREEN SHOTS

1. CONFIGURE B2B HA DATA LINK BETWEEN THE TWO ROUTERS, SPECIFYING THE LOCAL AND PEER IPv4 PHYSICAL INTERFACE ADDRESSES

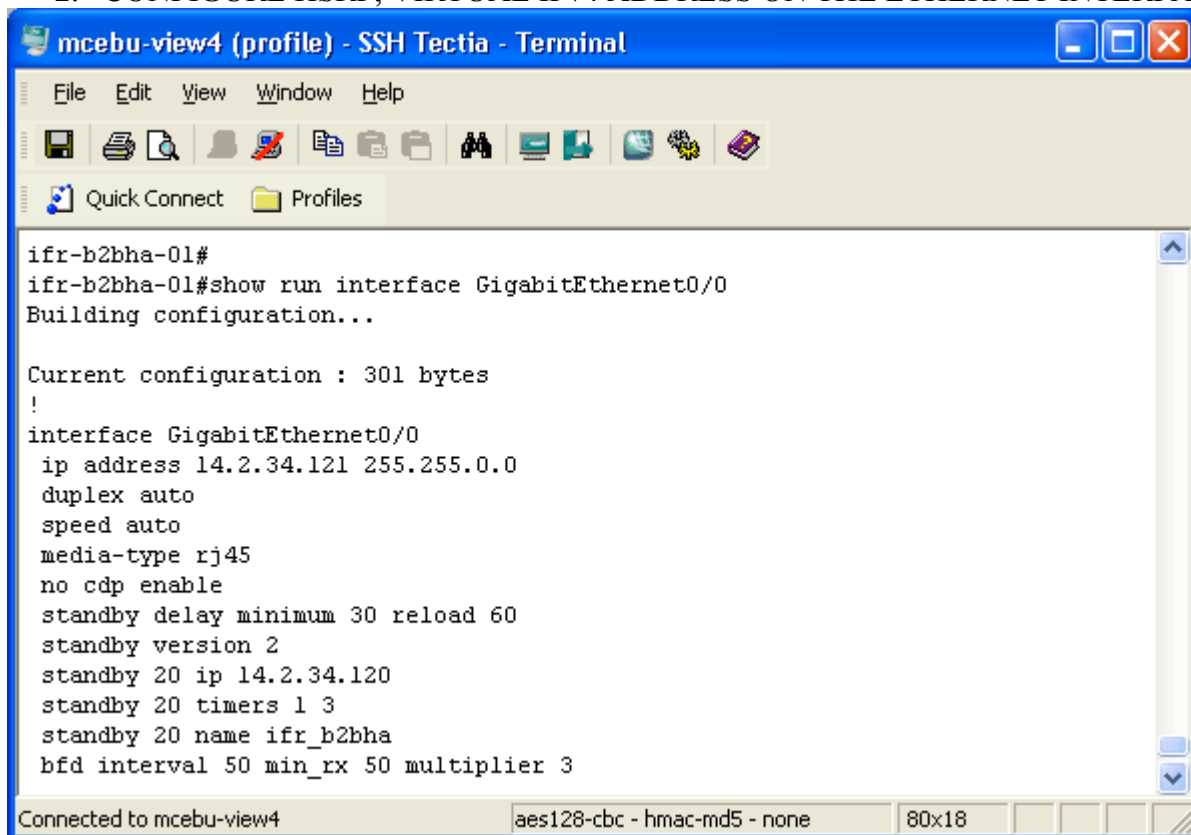


The screenshot shows a terminal window titled "mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal displays the following configuration commands and output:

```
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#show run | begin ipc zone default
ipc zone default
  association 1
  no shutdown
  protocol sctp
  local-port 5000
  local-ip 14.2.34.121
  remote-port 5000
  remote-ip 14.2.34.122
!
no aaa new-model
!
clock timezone PDT -8
!
no ipv6 cef
ip source-route
```

The terminal status bar at the bottom indicates: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", and "80x18".

2. CONFIGURE HSRP, VIRTUAL IPv4 ADDRESS ON THE ETHERNET INTERFACE

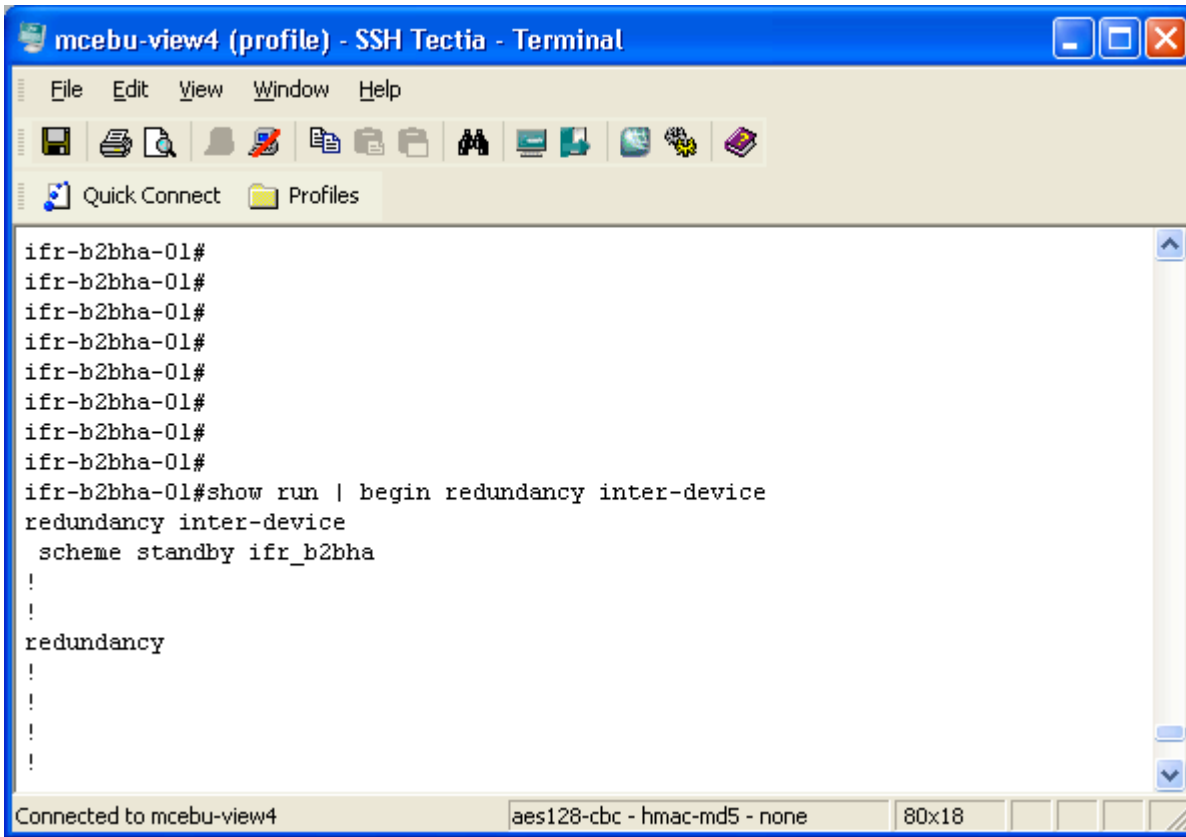


The screenshot shows a terminal window titled "mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal displays the following configuration for interface GigabitEthernet0/0:

```
iffr-b2bha-01#  
iffr-b2bha-01#show run interface GigabitEthernet0/0  
Building configuration...  
  
Current configuration : 301 bytes  
!  
interface GigabitEthernet0/0  
 ip address 14.2.34.121 255.255.0.0  
 duplex auto  
 speed auto  
 media-type rj45  
 no cdp enable  
 standby delay minimum 30 reload 60  
 standby version 2  
 standby 20 ip 14.2.34.120  
 standby 20 timers 1 3  
 standby 20 name iffr_b2bha  
 bfd interval 50 min_rx 50 multiplier 3
```

The terminal status bar at the bottom indicates: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", and "80x18".

3. CONFIGURE ROUTER FOR INTER-DEVICE REDUNDANCY (SPECIFYING HSRP SCHEME NAME USED IN STEP 2). THIS STEP WILL INDUCE PLATFORM RELOAD BEFORE PROCEEDING FURTHER.

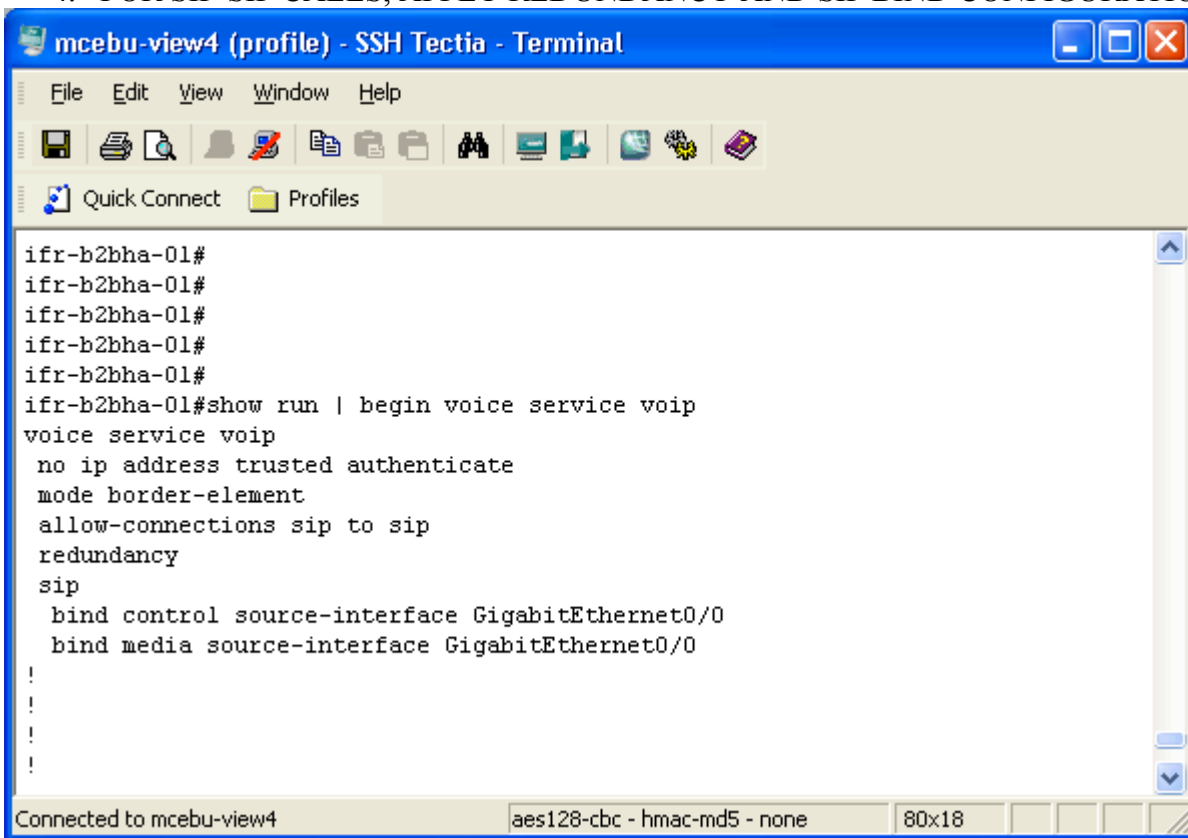


```
mcebu-view4 (profile) - SSH Tectia - Terminal
File Edit View Window Help
Quick Connect Profiles

iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#show run | begin redundancy inter-device
redundancy inter-device
  scheme standby iffr_b2bha
!
!
redundancy
!
!
!
!

Connected to mcebu-view4      aes128-cbc - hmac-md5 - none      80x18
```

4. FOR SIP-SIP CALLS, APPLY REDUNDANCY AND SIP BIND CONFIGURATION

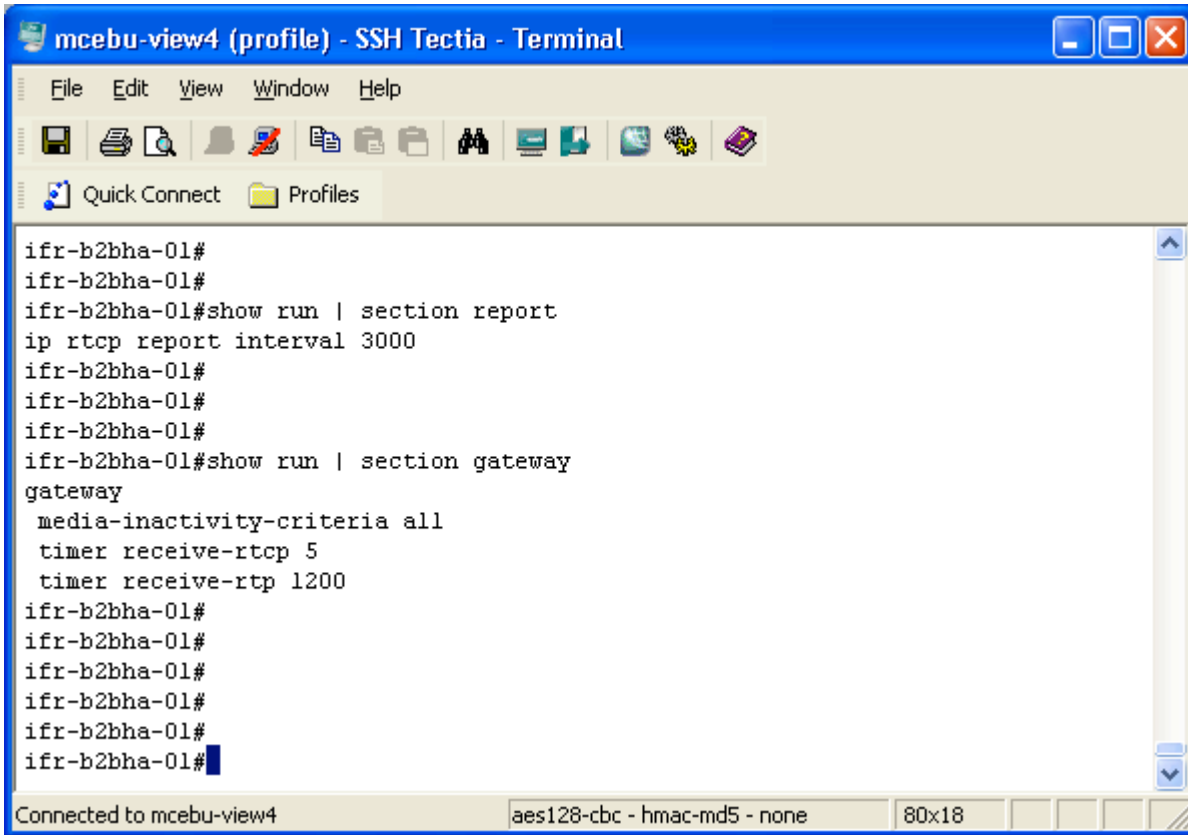


The image shows a terminal window titled "mcebu-view4 (profile) - SSH Tectia - Terminal". The window has a menu bar with "File", "Edit", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons for file operations and system functions. The main area of the terminal displays the following configuration commands for a Cisco IOS device:

```
ifrb2bha-01#
ifrb2bha-01#
ifrb2bha-01#
ifrb2bha-01#
ifrb2bha-01#
ifrb2bha-01#show run | begin voice service voip
voice service voip
  no ip address trusted authenticate
  mode border-element
  allow-connections sip to sip
  redundancy
  sip
    bind control source-interface GigabitEthernet0/0
    bind media source-interface GigabitEthernet0/0
  !
  !
  !
  !
```

At the bottom of the terminal window, there is a status bar with the following information: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", and "80x18".

5. APPLY MEDIA INACTIVITY TIMER CONFIGURATION FOR CALL DISCONNECT HANDLING AFTER SWITCHOVER



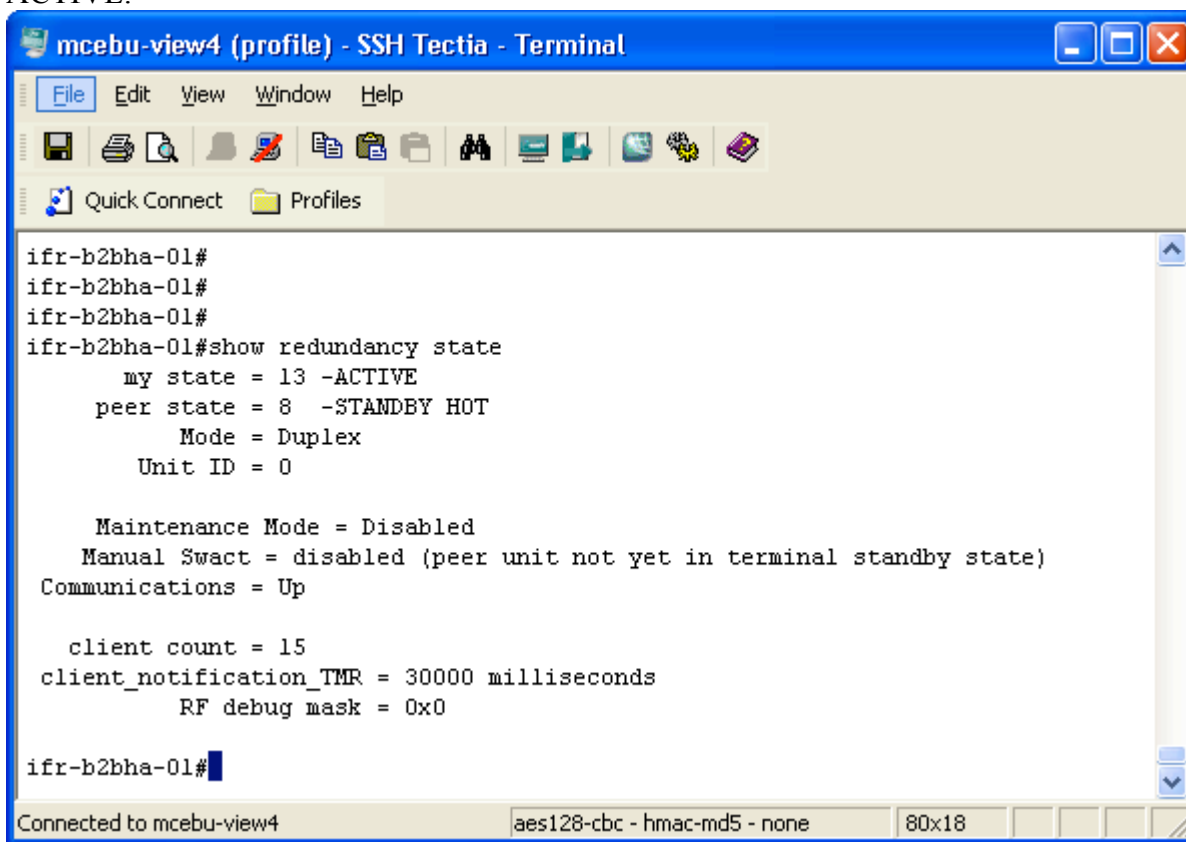
The screenshot shows a terminal window titled "mcebu-view4 (profile) - SSH Tectia - Terminal". The window has a menu bar with "File", "Edit", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons for file operations and system functions. The main area of the terminal displays the following text:

```
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#show run | section report  
ip rtcp report interval 3000  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#show run | section gateway  
gateway  
  media-inactivity-criteria all  
  timer receive-rtcp 5  
  timer receive-rtp 1200  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#  
iffr-b2bha-01#
```

At the bottom of the terminal window, there is a status bar with the following information: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", and "80x18".

6. APPLY SIMILAR CONFIGURATION ON THE SECOND ROUTER
7. RELOAD BOTH ROUTERS
8. VERIFY REDUNDANCY STATE ON BOTH ROUTERS

ACTIVE:

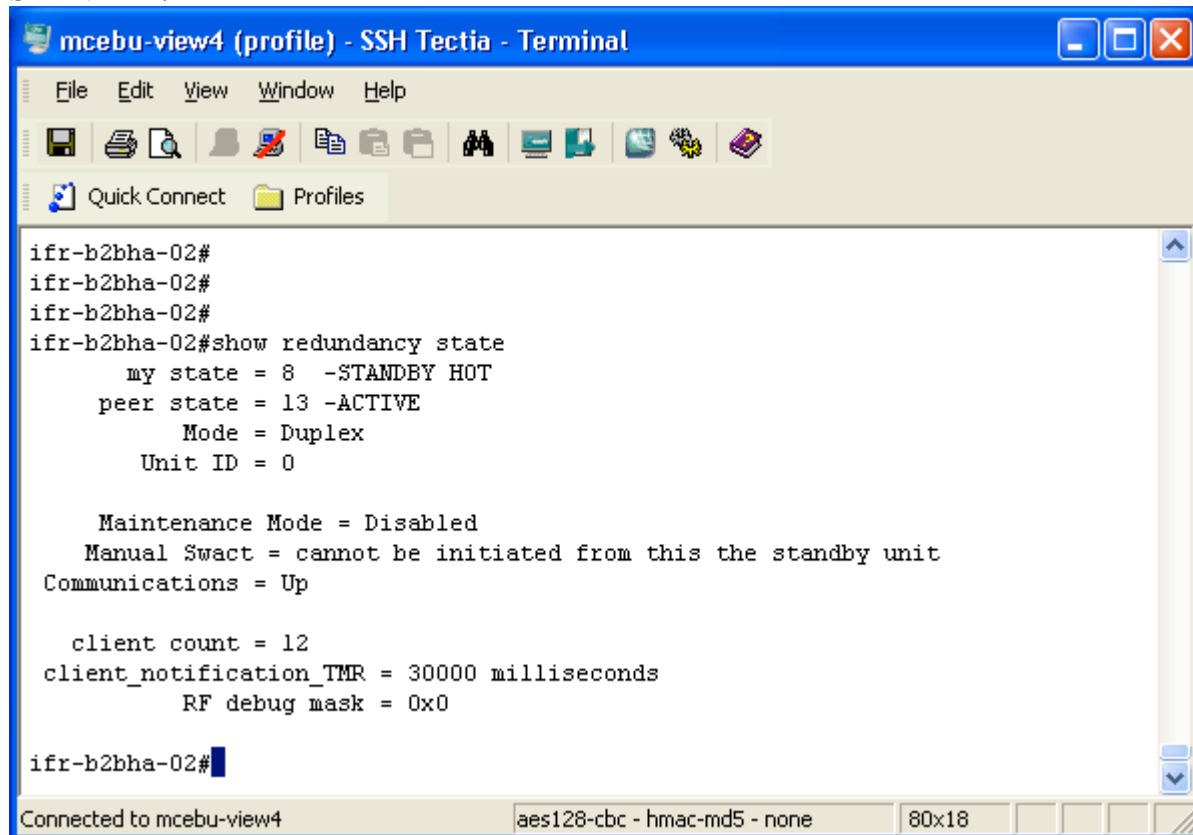


The image shows a terminal window titled "mcebu-view4 (profile) - SSH Tectia - Terminal". The window has a menu bar with "File", "Edit", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons for file operations and terminal functions. The main area of the terminal displays the following text:

```
ifr-b2bha-01#  
ifr-b2bha-01#  
ifr-b2bha-01#  
ifr-b2bha-01#show redundancy state  
    my state = 13 -ACTIVE  
    peer state = 8  -STANDBY HOT  
    Mode = Duplex  
    Unit ID = 0  
  
    Maintenance Mode = Disabled  
    Manual Swact = disabled (peer unit not yet in terminal standby state)  
    Communications = Up  
  
    client count = 15  
    client_notification_TMR = 30000 milliseconds  
    RF debug mask = 0x0  
  
ifr-b2bha-01#
```

At the bottom of the terminal window, there is a status bar with the following information: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", and "80x18".

STANDBY:



```
mcebu-view4 (profile) - SSH Tectia - Terminal
File Edit View Window Help
Quick Connect Profiles
iffr-b2bha-02#
iffr-b2bha-02#
iffr-b2bha-02#
iffr-b2bha-02#show redundancy state
  my state = 8 -STANDBY HOT
  peer state = 13 -ACTIVE
  Mode = Duplex
  Unit ID = 0

  Maintenance Mode = Disabled
  Manual Swact = cannot be initiated from this the standby unit
  Communications = Up

  client count = 12
  client_notification_TMR = 30000 milliseconds
  RF debug mask = 0x0

iffr-b2bha-02#
```

Connected to mcebu-view4 aes128-cbc - hmac-md5 - none 80x18

SIP-SIP CALL SCREENSHOTS

1. SET UP SIP-SIP CALL; CALL IS ESTABLISHED ON ACTIVE, AND CHECKPOINTED TO STANDBY.

ACTIVE:

1:mcebu-view4 (profile) - SSH Tectia - Terminal

File Edit View Window Help

Quick Connect Profiles

```
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#
iffr-b2bha-01#show redundancy state
    my state = 13 -ACTIVE
    peer state = 8  -STANDBY HOT
    Mode = Duplex
    Unit ID = 0

    Maintenance Mode = Disabled
    Manual Swact = disabled (peer unit not yet in terminal standby state)
    Communications = Up

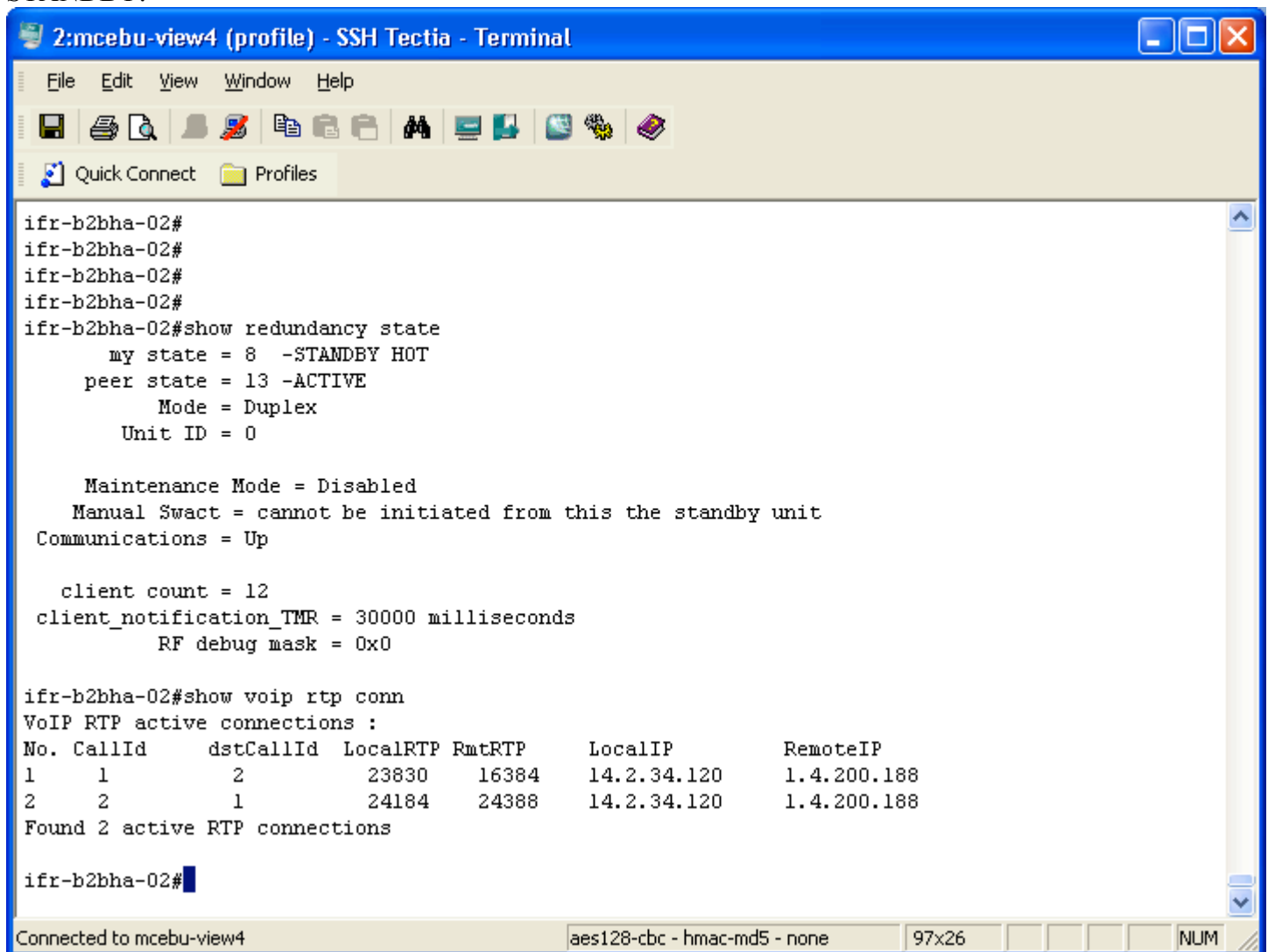
    client count = 15
    client_notification_TMR = 30000 milliseconds
    RF debug mask = 0x0

iffr-b2bha-01#show voip rtp conn
VoIP RTP active connections :
No. CallId    dstCallId  LocalRTP  RmtRTP    LocalIP    RemoteIP
1    1          2          23830    16384     14.2.34.120  1.4.200.188
2    2          1          24184    24388     14.2.34.120  1.4.200.188
Found 2 active RTP connections

iffr-b2bha-01#
```

Connected to mcebu-view4 aes128-cbc - hmac-md5 - none 97x26 NUM

STANDBY:



The image shows a terminal window titled "2:mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal displays the following output:

```
ifrb2bha-02#
ifrb2bha-02#
ifrb2bha-02#
ifrb2bha-02#
ifrb2bha-02#show redundancy state
  my state = 8 -STANDBY HOT
  peer state = 13 -ACTIVE
  Mode = Duplex
  Unit ID = 0

  Maintenance Mode = Disabled
  Manual Swact = cannot be initiated from this the standby unit
  Communications = Up

  client count = 12
  client_notification_TMR = 30000 milliseconds
  RF debug mask = 0x0

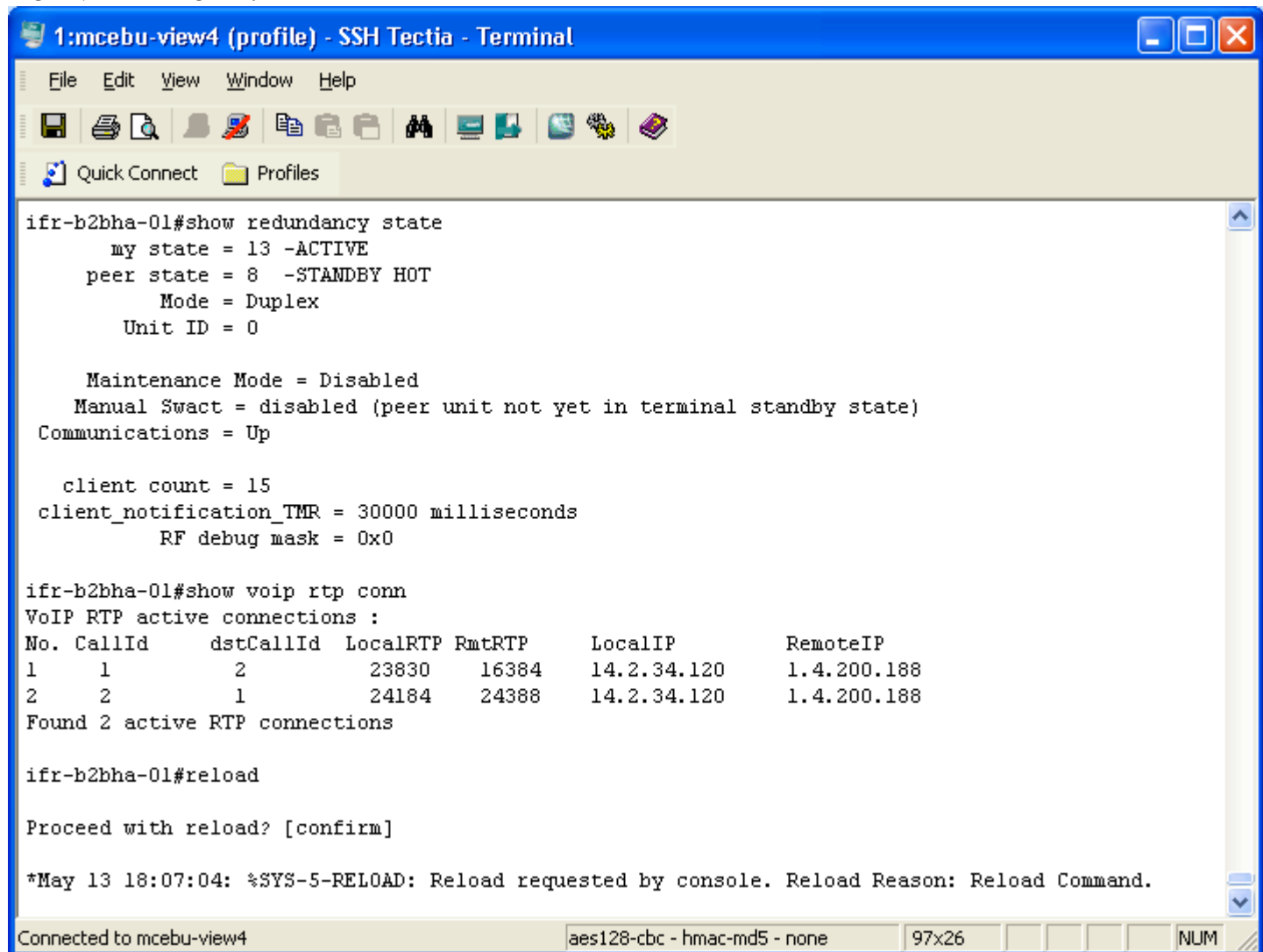
ifrb2bha-02#show voip rtp conn
VoIP RTP active connections :
No. CallId      dstCallId  LocalRTP  RmtRTP    LocalIP    RemoteIP
1      1          2         23830    16384     14.2.34.120  1.4.200.188
2      2          1         24184    24388     14.2.34.120  1.4.200.188
Found 2 active RTP connections

ifrb2bha-02#
```

The terminal window includes a menu bar (File, Edit, View, Window, Help), a toolbar with various icons, and a status bar at the bottom showing "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", "97x26", and "NUM".

2. RELOAD ACTIVE ROUTER.

ACTIVE->RELOAD:



The screenshot shows a terminal window titled "1:mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal displays the following commands and output:

```
ifr-b2bha-01#show redundancy state
  my state = 13 -ACTIVE
  peer state = 8 -STANDBY HOT
  Mode = Duplex
  Unit ID = 0

  Maintenance Mode = Disabled
  Manual Swact = disabled (peer unit not yet in terminal standby state)
  Communications = Up

  client count = 15
  client_notification_TMR = 30000 milliseconds
  RF debug mask = 0x0

ifr-b2bha-01#show voip rtp conn
VoIP RTP active connections :
No. CallId      dstCallId LocalRTP RmtRTP      LocalIP      RemoteIP
1      1          2        23830  16384      14.2.34.120  1.4.200.188
2      2          1        24184  24388      14.2.34.120  1.4.200.188
Found 2 active RTP connections

ifr-b2bha-01#reload

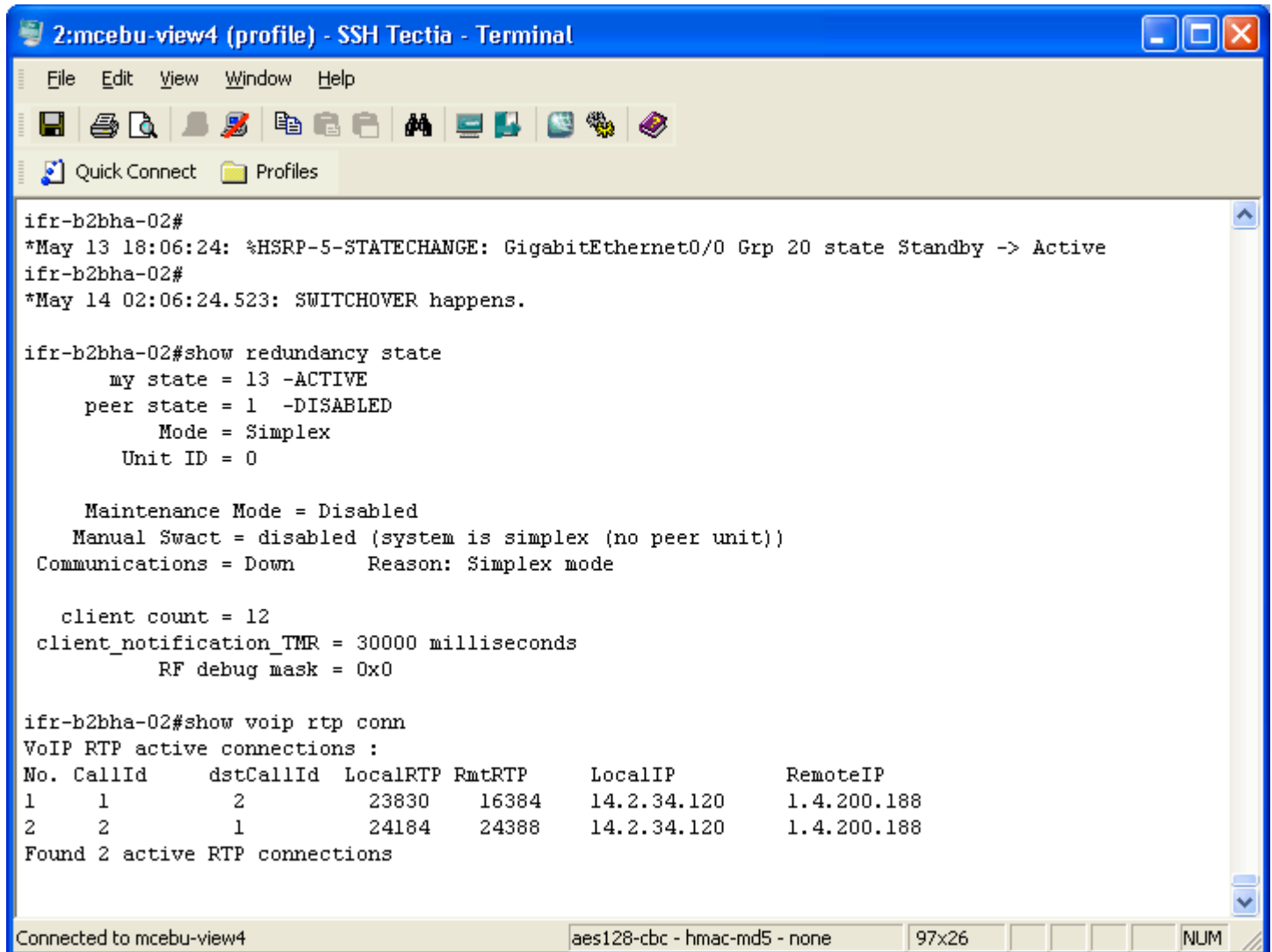
Proceed with reload? [confirm]

*May 13 18:07:04: %SYS-5-RELOAD: Reload requested by console. Reload Reason: Reload Command.
```

At the bottom of the terminal window, the status bar shows: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", "97x26", and "NUM".

3. STANDBY TAKES OVER AS NEW ACTIVE, CALL IS STILL PRESERVED

STANDBY->NEW ACTIVE:



The screenshot shows a terminal window titled "2:mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal output shows the following sequence of events:

```
ifrb2bha-02#
*May 13 18:06:24: %HSRP-5-STATECHANGE: GigabitEthernet0/0 Grp 20 state Standby -> Active
ifrb2bha-02#
*May 14 02:06:24.523: SWITCHOVER happens.

ifrb2bha-02#show redundancy state
  my state = 13 -ACTIVE
  peer state = 1  -DISABLED
  Mode = Simplex
  Unit ID = 0

  Maintenance Mode = Disabled
  Manual Swact = disabled (system is simplex (no peer unit))
  Communications = Down      Reason: Simplex mode

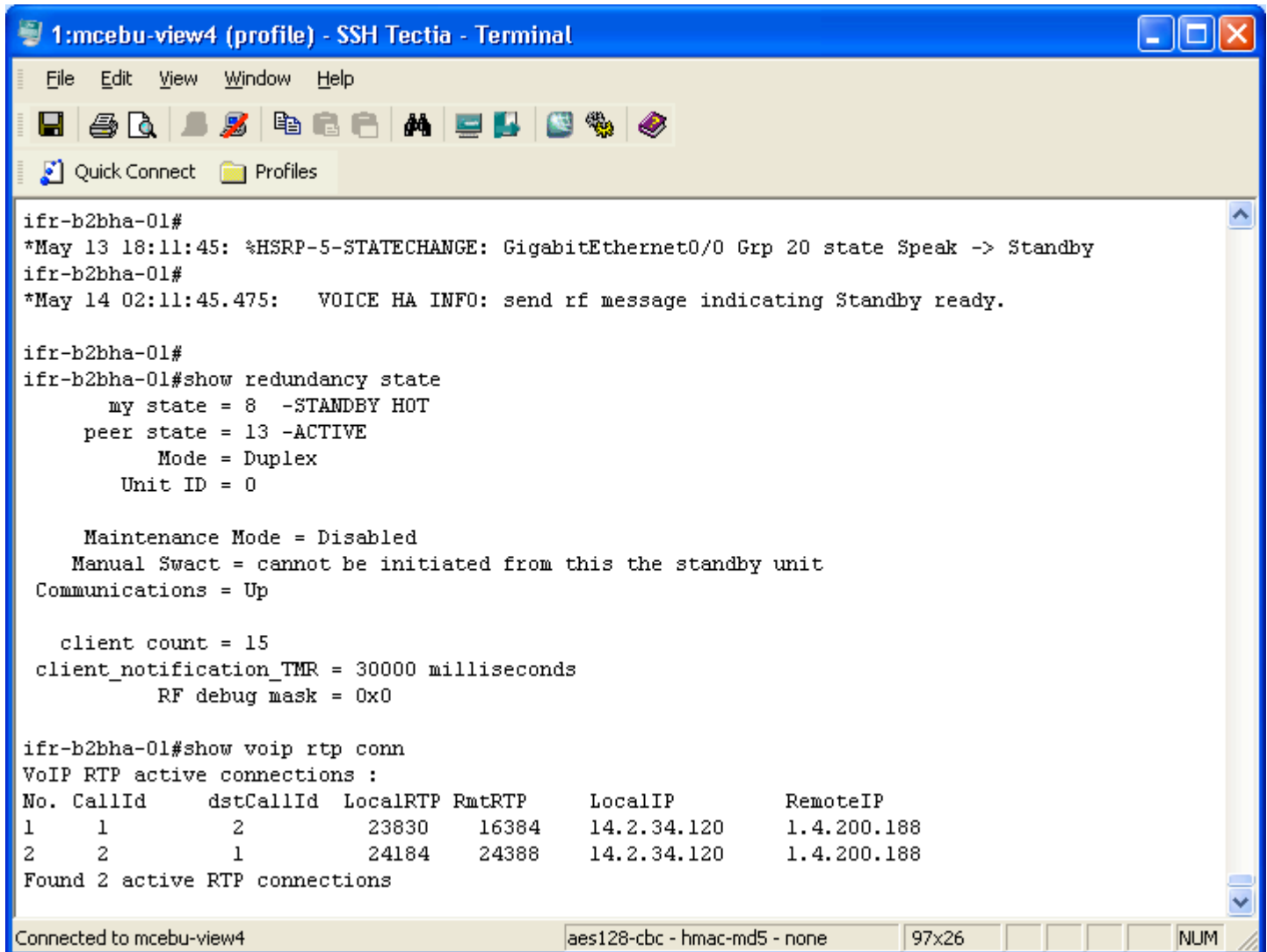
  client count = 12
  client_notification_TMR = 30000 milliseconds
  RF debug mask = 0x0

ifrb2bha-02#show voip rtp conn
VoIP RTP active connections :
No. CallId      dstCallId  LocalRTP  RmtRTP     LocalIP      RemoteIP
1      1          2          23830     16384       14.2.34.120  1.4.200.188
2      2          1          24184     24388       14.2.34.120  1.4.200.188
Found 2 active RTP connections
```

The terminal window also shows a status bar at the bottom with the following information: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", "97x26", and "NUM".

4. PREVIOUS ACTIVE RELOADS AS NEW STANDBY, CALL IS PRESERVED ON STANDBY

NEW STANDBY:



```
1:mcebu-view4 (profile) - SSH Tectia - Terminal
File Edit View Window Help
Quick Connect Profiles
iffr-b2bha-01#
*May 13 18:11:45: %HSRP-5-STATECHANGE: GigabitEthernet0/0 Grp 20 state Speak -> Standby
iffr-b2bha-01#
*May 14 02:11:45.475: VOICE HA INFO: send rf message indicating Standby ready.

iffr-b2bha-01#
iffr-b2bha-01#show redundancy state
  my state = 8 -STANDBY HOT
  peer state = 13 -ACTIVE
  Mode = Duplex
  Unit ID = 0

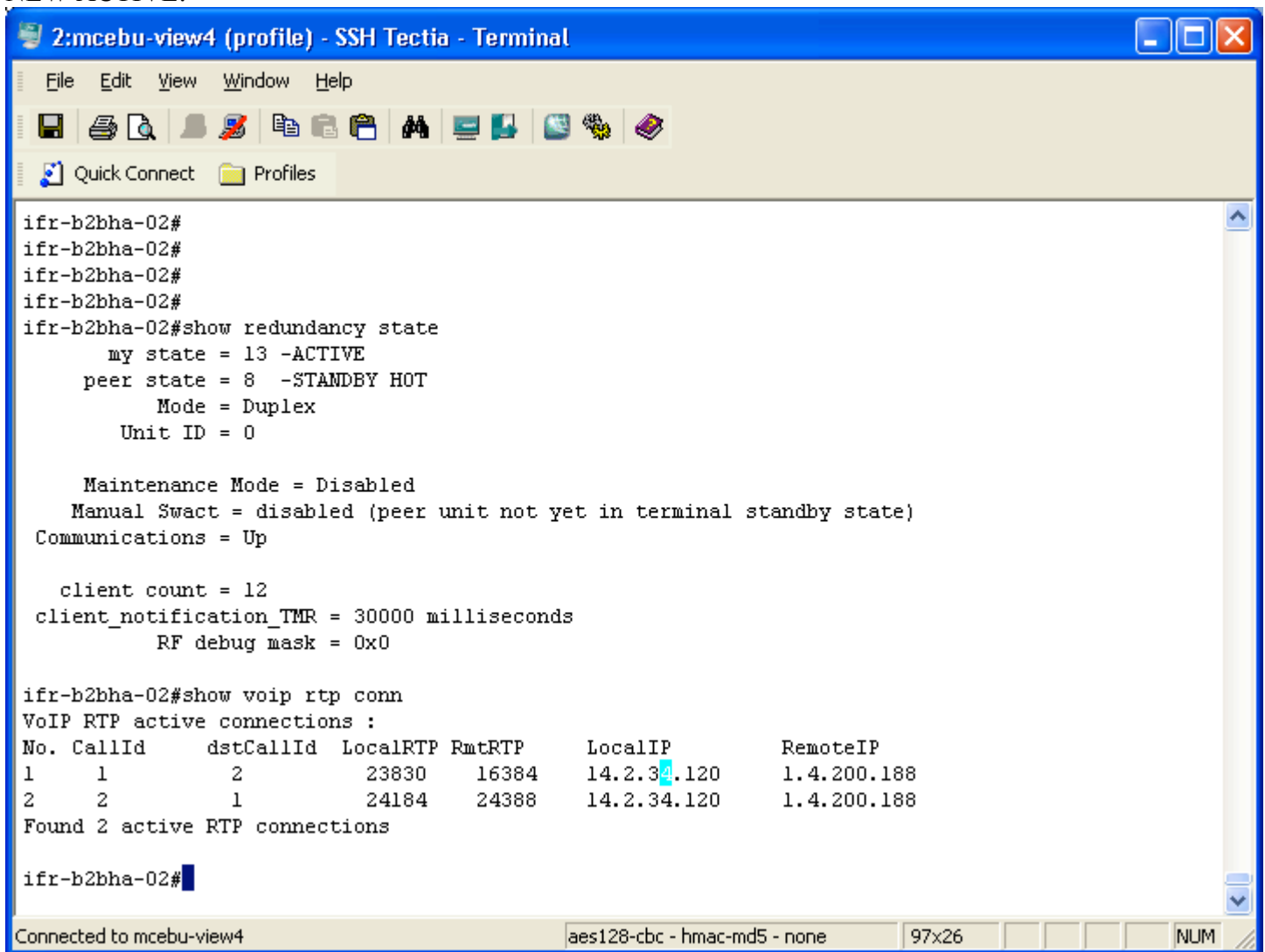
  Maintenance Mode = Disabled
  Manual Swact = cannot be initiated from this the standby unit
  Communications = Up

  client count = 15
  client_notification_TMR = 30000 milliseconds
  RF debug mask = 0x0

iffr-b2bha-01#show voip rtp conn
VoIP RTP active connections :
No. CallId      dstCallId  LocalRTP  RmtRTP    LocalIP      RemoteIP
1      1          2          23830    16384      14.2.34.120  1.4.200.188
2      2          1          24184    24388      14.2.34.120  1.4.200.188
Found 2 active RTP connections
```

Connected to mcebu-view4 aes128-cbc - hmac-md5 - none 97x26 NUM

NEW ACTIVE:



The screenshot shows a terminal window titled "2:mcebu-view4 (profile) - SSH Tectia - Terminal". The terminal content is as follows:

```
ifr-b2bha-02#  
ifr-b2bha-02#  
ifr-b2bha-02#  
ifr-b2bha-02#  
ifr-b2bha-02#show redundancy state  
  my state = 13 -ACTIVE  
  peer state = 8 -STANDBY HOT  
  Mode = Duplex  
  Unit ID = 0  
  
  Maintenance Mode = Disabled  
  Manual Swact = disabled (peer unit not yet in terminal standby state)  
  Communications = Up  
  
  client count = 12  
  client_notification_TMR = 30000 milliseconds  
  RF debug mask = 0x0  
  
ifr-b2bha-02#show voip rtp conn  
VoIP RTP active connections :  
No. CallId    dstCallId  LocalRTP  RmtRTP    LocalIP    RemoteIP  
1    1          2          23830     16384     14.2.34.120  1.4.200.188  
2    2          1          24184     24388     14.2.34.120  1.4.200.188  
Found 2 active RTP connections  
  
ifr-b2bha-02#
```

The terminal status bar at the bottom indicates: "Connected to mcebu-view4", "aes128-cbc - hmac-md5 - none", "97x26", and "NUM".