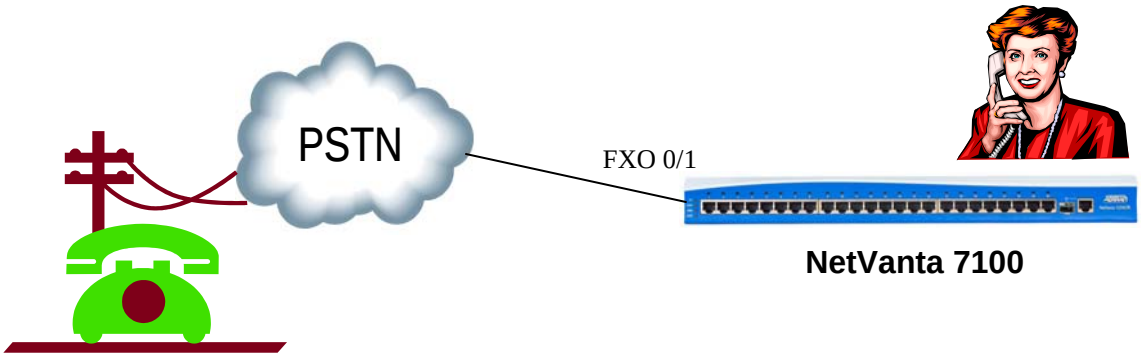
NetVanta 7100 Exercise

Basic Installation and Call Handling



This exercise begins with the "Out of the Box" configuration of the NetVanta 7100. You will create two SIP users, a door phone user account, modify the current voice configuration, and then place calls following a typical call flow where inbound calls go to the auto attendant. In the second call flow example, you will create a ring group and then have inbound calls ring all phones that are members of that ring group.

CONNECTIONS

- ❑ An ADTRAN IP 712 is connected to your NetVanta 7100 eth 0/1
- ❑ A Polycom SoundPoint IP601 is connected to NetVanta 7100 eth 0/2
- ❑ Analog trunk #1 is connected to NetVanta 7100 FXO 0/1
- ❑ Analog trunk #2 is connected to NetVanta 7100 FXO 0/2.
- ❑ IP/SIP trunk is connected to eth 0/0

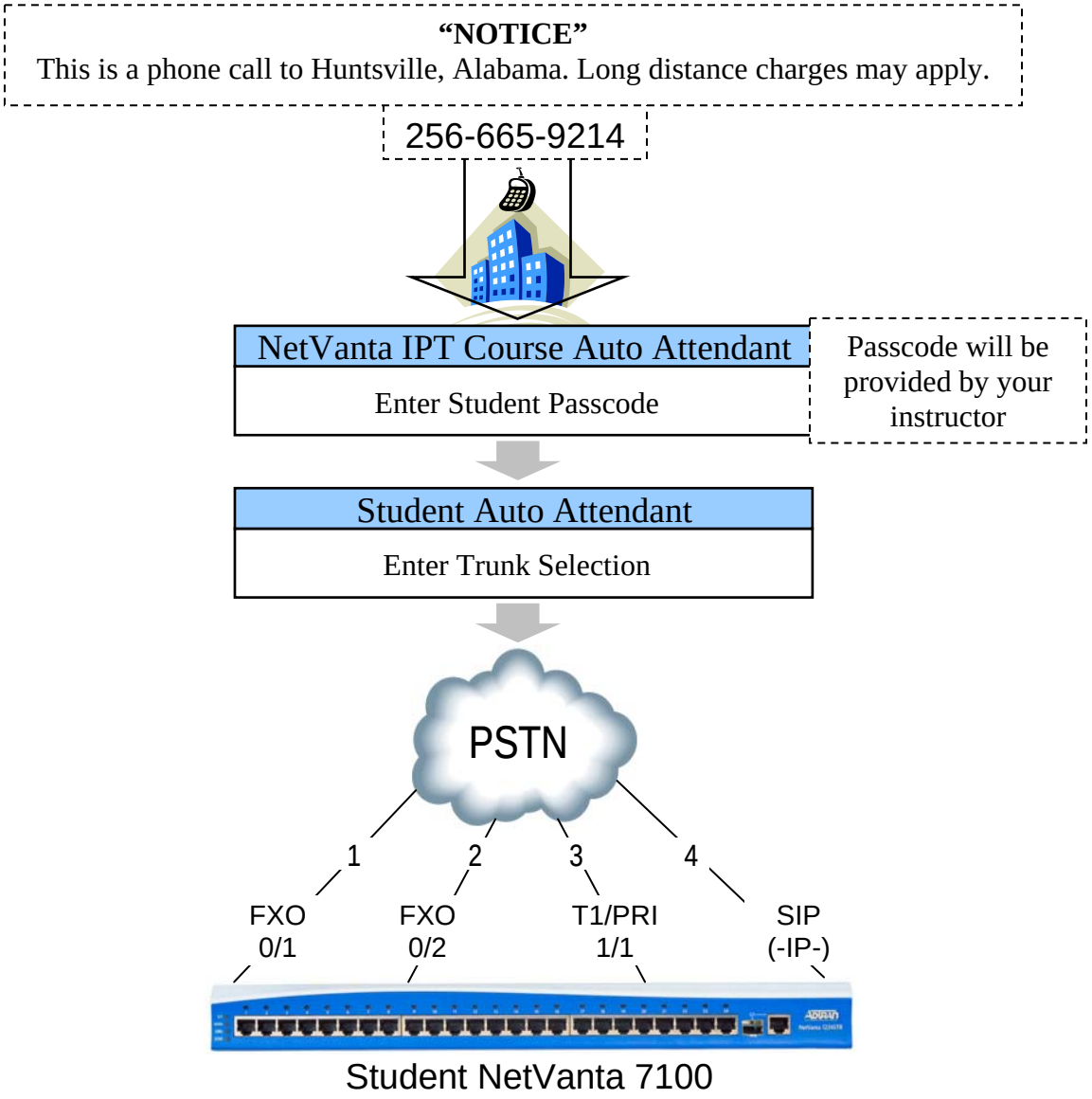
** Only Analog trunk #1 will be used in this lab*

NETVANTA IP TELEPHONY COURSE AUTO ATTENDANT

This lab includes **OPTIONAL** trunk calls into **YOUR** configured student NetVanta 7000 lab equipment. When you see the symbol, this represents a call made from **YOUR OWN PHONE** (cell phone, business phone, etc…) into the **NetVanta IP Telephony Course Auto Attendant**.

Based on the lab exercise, you will be asked to select one of four call choices from within the NetVanta IP Telephony Course Student Auto Attendant:

- **1** for inbound call to your **first analog trunk**
- **2** for inbound call to your **second analog trunk**
- **3** for inbound call to user **2003** on your configured **T1/PRI**
- **4** for inbound call on your configured **SIP trunk**

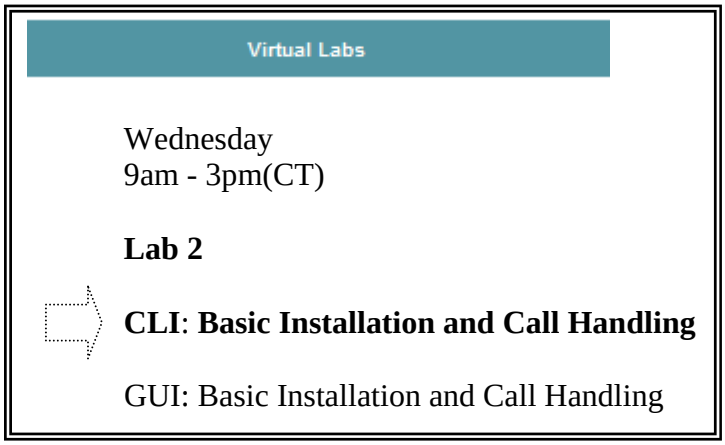


ACCESSING LAB NETVANTA 7100 - COMMAND LINE INTERFACE (CLI)

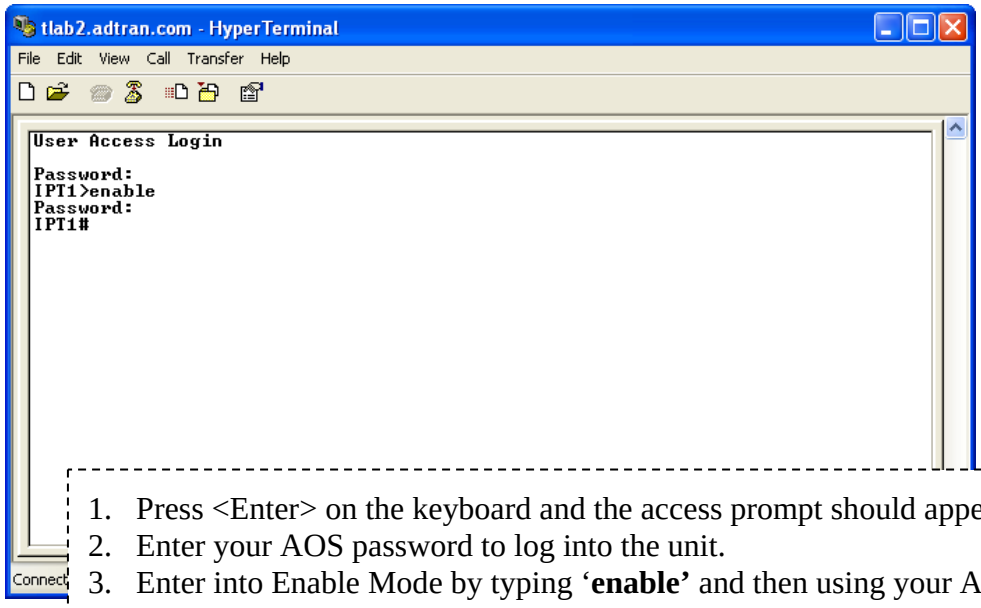
❑ Log in to www.adtran.com and then navigate to your student web page (www.adtran.com/training/vilt_ipt).

This link is on your CD and in your course information

❑ From the student web page, navigate down to the Virtual Labs section



❑ Select **CLI** as shown above for Command Line Interface



1. Press <Enter> on the keyboard and the access prompt should appear.
2. Enter your AOS password to log into the unit.
3. Enter into Enable Mode by typing '**enable**' and then using your AOS password.

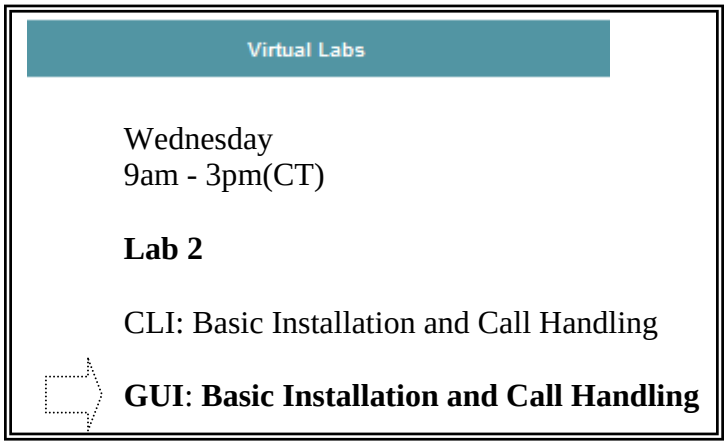
* *The Password will be provided by your instructor*

ACCESSING LAB NETVANTA 7100 – GRAPHICAL USER INTERFACE (GUI)

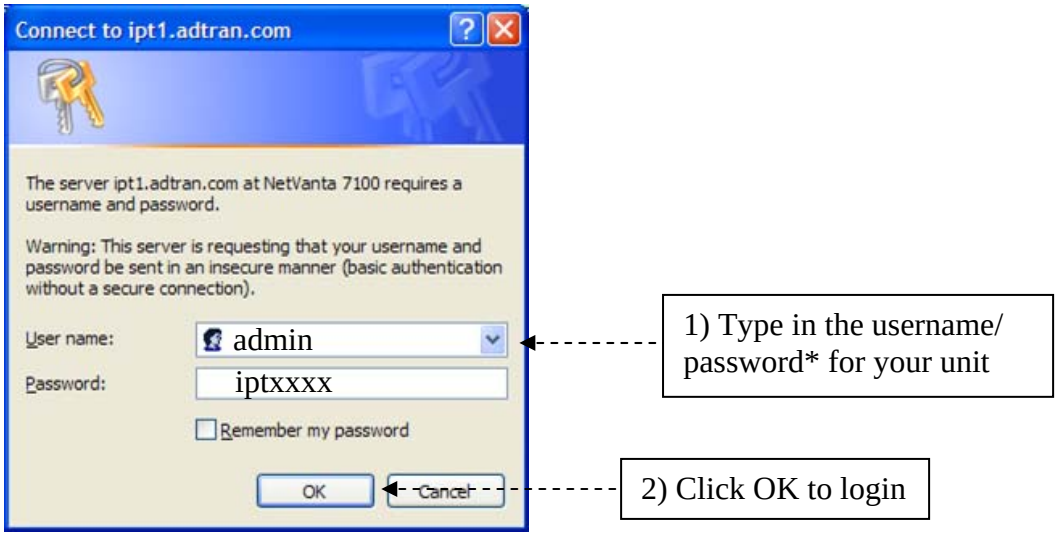
❑ Log in to www.adtran.com and then navigate to your student web page (www.adtran.com/training/vilt_ipt).

This link is on your CD and in your course information

❑ From the student web page, navigate down to the Virtual Labs section



❑ Select **GUI** as shown above for the Graphical User Interface and login to the NetVanta 7100 management interface.



* *The Password will be provided by your instructor*

DEFAULT YOUR LAB NETVANTA 7100

Before you begin this lab, prepare your student NetVanta 7100.

- ❑ Access the CLI of your NetVanta 7100
- ❑ Enter into Enable Mode by typing '**enable**' and then using your AOS password
- ❑ Enter the following commands to return this unit to "LAB DEFAULTS"

NV7100# **erase cflash Polycom/*0004***

NV7100# **erase cflash ADTRAN/*00a0***

NV7100# **copy flash ipt-config startup-config**

NV7100# **erase dynvoice-config**

NV7100# **reload**

Enter <**n**> for 'no' when asked if wanting to save system configuration

Enter <**y**> for 'yes' when asked if wanting to reboot system

ACCESS YOUR LAB NETVANTA 7100

- ❑ GUI Management Interface
  - Access and login to the GUI interface of your Netvanta 7100

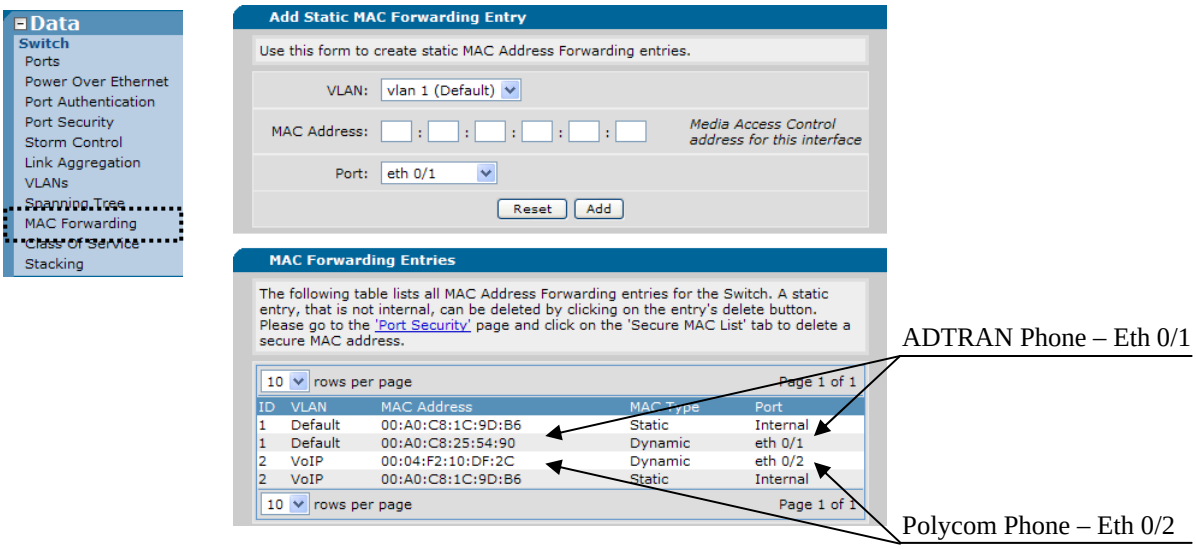
If needed, see ACCESSING LAB UNIT (GUI) for instructions

- ❑ CLI Connection
  - Re-establish the CLI connection and log back in to the Enable Mode
  - If needed, see ACCESSING LAB UNIT (CLI) for instructions

OBTAIN MAC ADDRESS OF IP PHONES

❑ Navigate to the **Data / Switch / MAC Forwarding** screen.

From this screen, you can see the MAC addresses of connected devices and the physical ports that they are connected to.



❑ Note the MAC addresses associated with Ethernet ports 0/1 and 0/2. *

Write MAC addresses below for use during voice user creation:

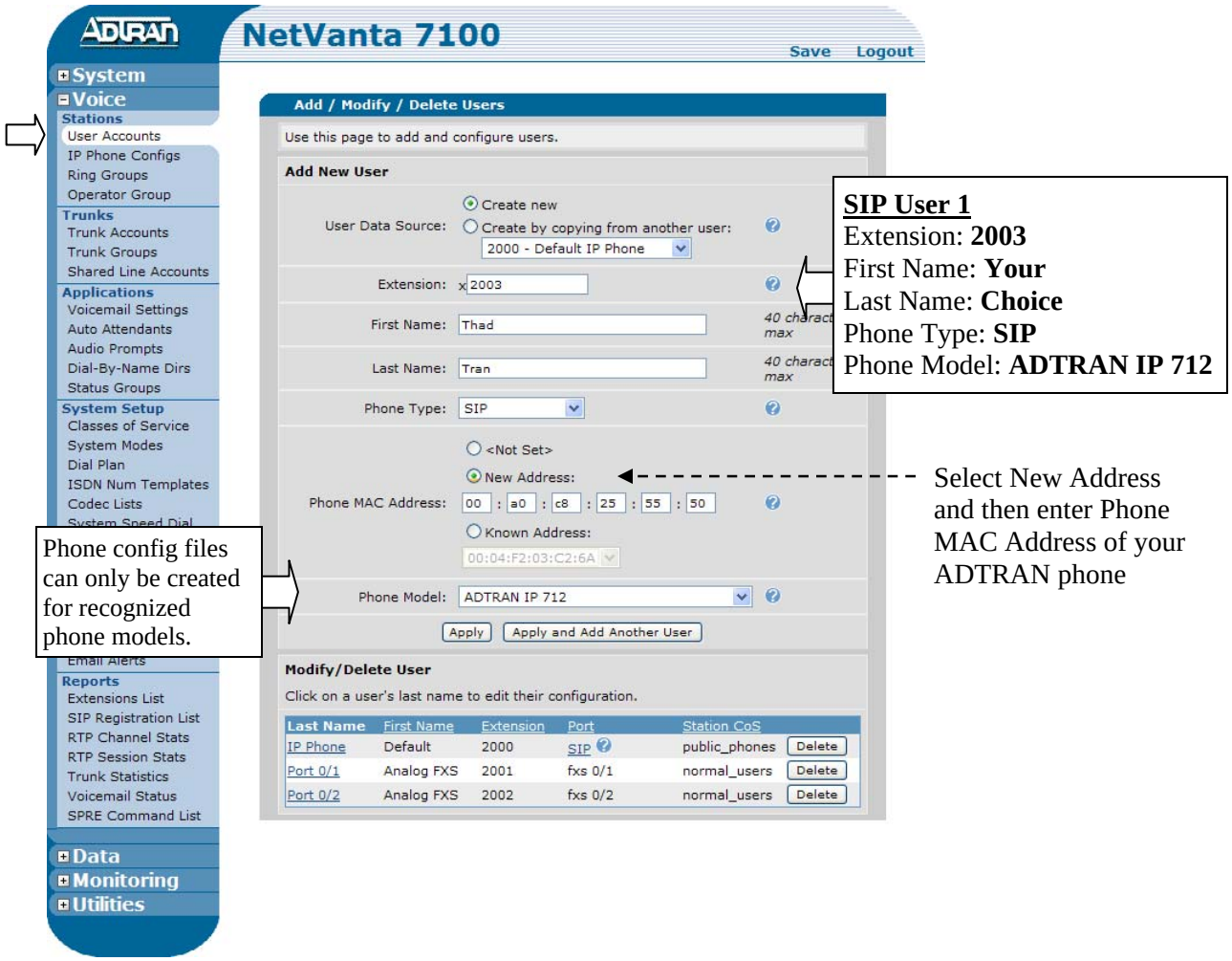
ADTRAN IP 712	eth 0/1	00:A0:C8:___:___:___
Polycom SoundPoint IP 601	eth 0/2	00:04:F2:___:___:___

* If you do not see eth 0/1 and eth 0/2 in the MAC Forwarding table, complete the following:

1. Navigate to the **Data / Switch / Power over Ethernet** screen.
2. Cycle the power of Eth 0/1 and Eth 0/2 from **AUTO** to **OFF**.
3. Cycle the power of Eth 0/1 and Eth 0/2 from **OFF** to **AUTO**.
4. Return to the **Data / Switch / MAC Forwarding** screen as shown above and obtain MAC addresses after phones have booted.

CREATE SIP VOICE USERS 2003 and 2004

1. Select **Voice / Stations / User Accounts** from the NetVanta 7100 menus.



2. Enter SIP User #1's **extension**, **name**, and **Phone Type**.

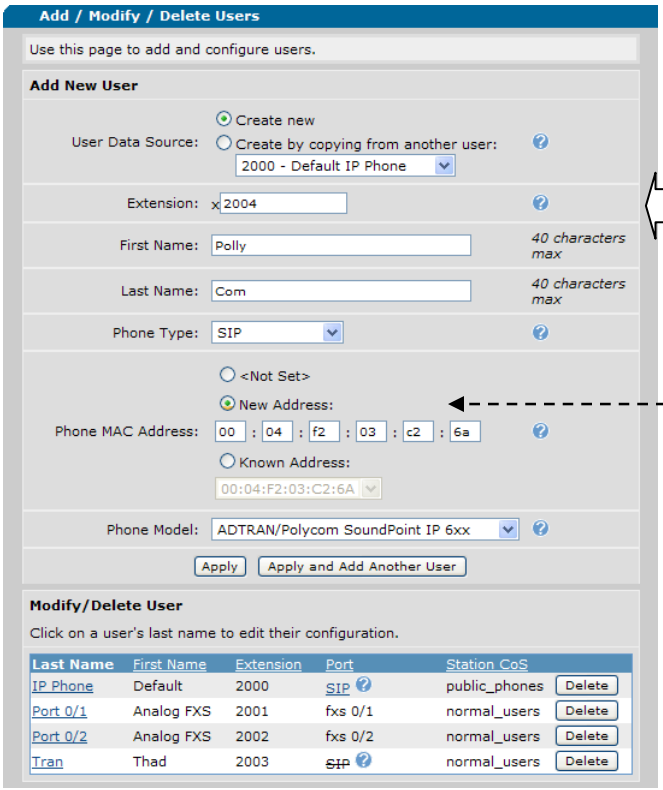
3. Select the **New Address** option and then enter the MAC address of the ADTRAN IP 712 phone.

4. Change the Phone Model to **ADTRAN IP 712**

5. Click **Apply and Add Another User**.

*Clicking "**Apply and Add Another User**" creates the configured voice user but leaves you on the Voice / Stations / User Accounts screen instead of the New Voice User Edit screen.*

6. From the **Voice / Stations / User Accounts** screen, complete the steps below:



SIP User 2
Extension: **2004**
First Name: **Your**
Last Name: **Choice**
Phone Type: **SIP**
Phone Model: **SoundPoint IP 6xx**

Select New Address and then enter Phone MAC Address of your Polycom phone

7. Enter SIP User #2's **extension**, **name**, and **Phone Type**.

8. Select the **New Address** option and then enter the MAC address of the ADTRAN/Polycom SoundPoint **IP 601**.

9. Change the Phone Model to ADTRAN/Polycom SoundPoint **IP 6xx** and then click Apply.

Q: What information must be entered to create a new SIP user for a known phone model?

_____

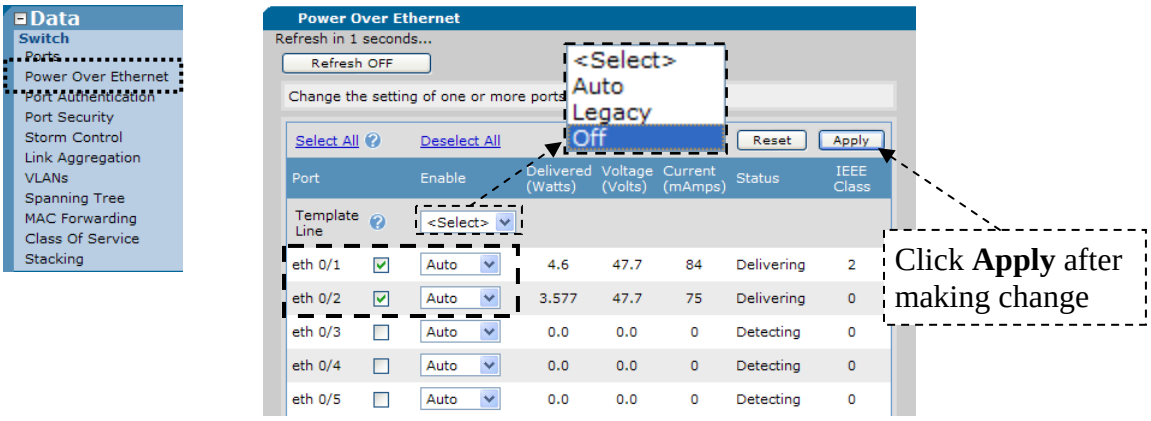
Q: Where are phone configuration files created by the NetVanta 7100 stored?

_____

CYCLE POWER OF PoE PORTS

The ADTRAN and Polycom SIP based phones load configuration files at boot. If the voice user was created after the phone had already been plugged in, removing power to the port that the phone is connected to is one way to force the IP phone to reboot.

10. Navigate to the **Data / Switch / Power over Ethernet** screen.



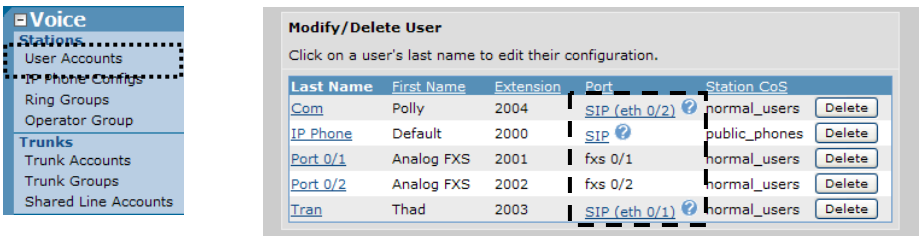
11. Cycle the power of Eth 0/1 and Eth 0/2 from **AUTO** to **OFF**.

12. Cycle the power of Eth 0/1 and Eth 0/2 from **OFF** to **AUTO**.

CHECK REGISTRATION STATUS OF SIP USERS

After phones have had enough time to boot (allow about 2 ½ minutes), one location where the status of SIP phones can be displayed is on the following screen:

13. Navigate to the **Voice / Stations / User Accounts** screen.



If SIP user has **registered** with the NetVanta 7100, a line displays below the word SIP.

If SIP user has **not registered** with the NetVanta 7100, a line displays though the word ~~SIP~~.

The MAC address entered for this phone can also be seen by hovering cursor of **?** bubble.

ACCESS VOICEMAIL

Newly created voice users are given access to Voicemail by default. When a voice user accesses voicemail for the first time, the Voicemail Setup Wizard runs. The user will be prompted to record a name, greeting, and to change their voicemail password.

In the following steps, you will set up voicemail for user 2003. Next you will call and leave a message for 2003. Finally, you will listen and delete the message.

The  symbol represents a call made from **your own phone** into the **NetVanta IP Telephony Course Auto Attendant**.

14. Set up Voicemail for voice user 2003.

1. Dial  1-256-665-9214
2. Enter Pass Code for Student Auto Attendant (*your 4 digit passcode*)
3. Press 1 to place call into your first Analog Trunk

   Call is initiated inbound on the first Analog trunk to the Auto Attendant (8200)

4. Enter 8500, for Voicemail, when asked to enter extension
   Mailbox? Enter 2003 followed by #
   Password? Enter 1234 followed by #

5. Follow the prompts to record your name, greeting, and a new voicemail password of "**1111**". Hang up when complete.

15. Call your IPT lab site and leave message for voice user 2003.

1. Dial  1-256-665-9214
2. Enter Pass Code for Student Auto Attendant (*your 4 digit passcode*)
3. Press 1 to place call into your first Analog Trunk

   Call is initiated inbound on the first Analog trunk to the Auto Attendant (8200)

4. Enter 2003 when asked for extension.

   Call is sent to voice user 2003. Call coverage is configured to "Go to Voicemail" after 4 rings.

5. Leave message and then hang up when complete.

16. Call your IPT lab site and check Voicemail for user 2003.

1. Dial 1-256-665-9214
2. Enter Pass Code for Student Auto Attendant (*your 4 digit passcode*)
3. Press 1 to place call into your first Analog Trunk

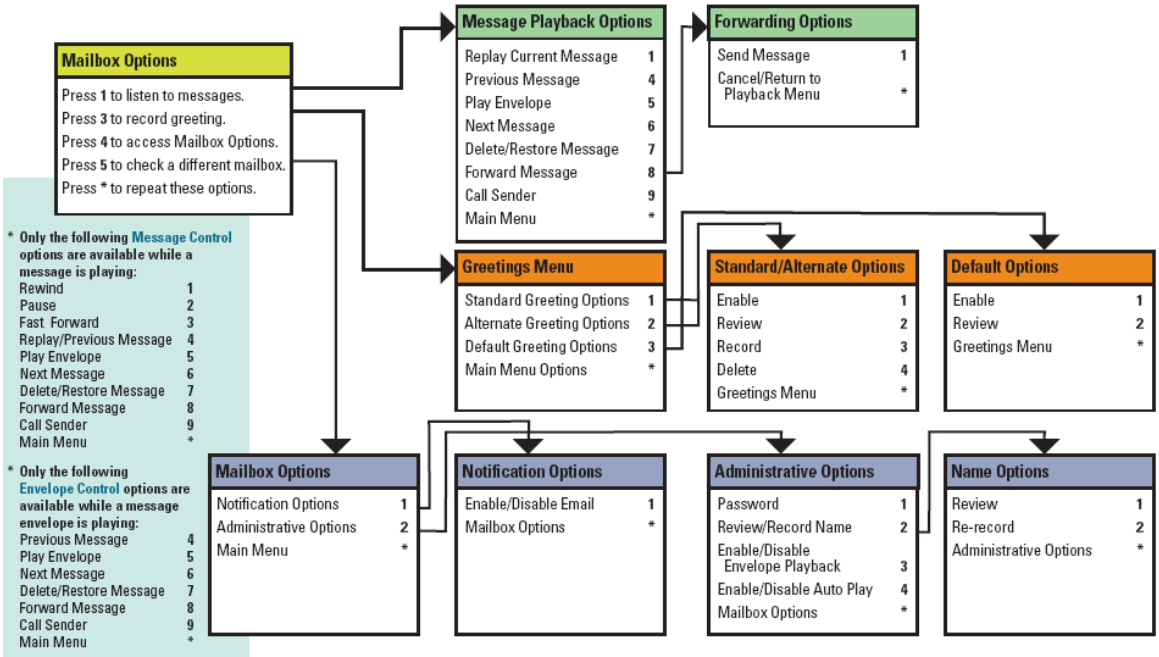
Call is initiated inbound on the first Analog trunk to the Auto Attendant (8200)

4. Enter 8500, for Voicemail, when asked to enter extension
   Mailbox? Enter 2003 followed by #
   Password? Enter 1111 followed by #

5. Follow the prompts to listen to message. Delete message after listening.

Voicemail Menus

Time permitting; navigate through Voicemail to familiarize yourself with the different Voicemail options.



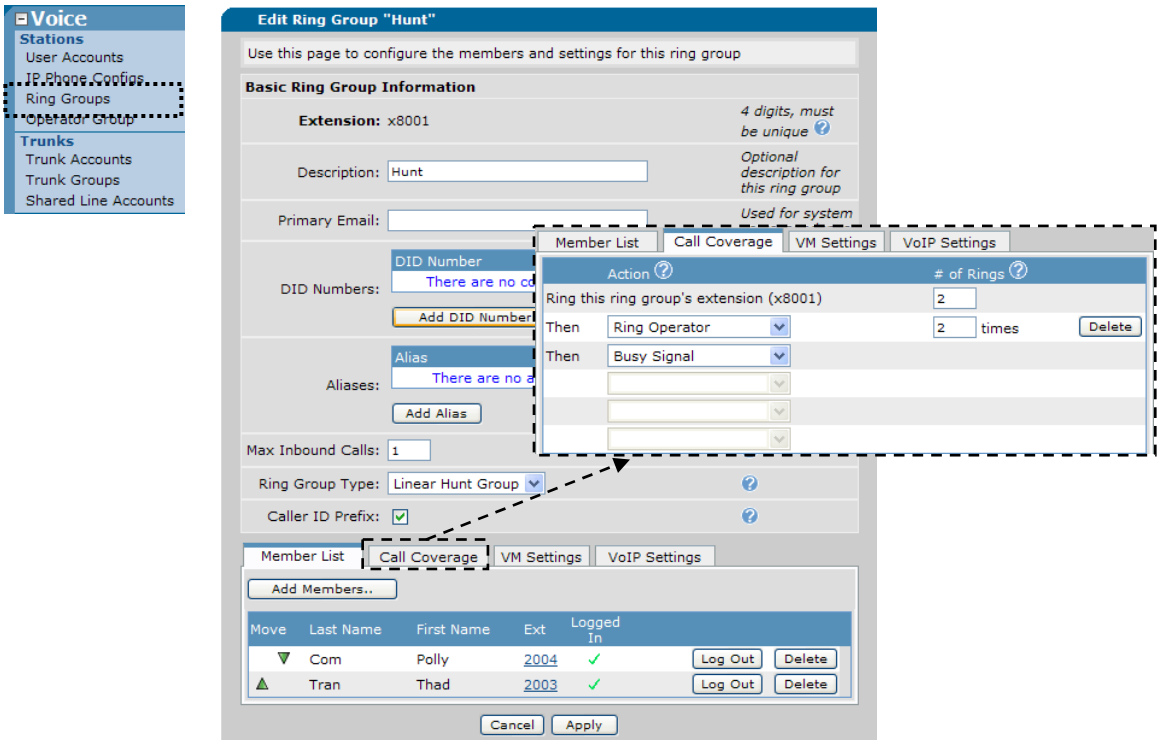
Q: How many voicemail ports are available with the NetVanta 7000 Series?

Ring Group and Door Phone

In the following steps, you will create a ring group and a door phone user account. You will then link the two so that when a user presses a button on the door phone, it will dial the users added to the ring group. The **door phone** has been connected to port **FXS 2/1**.

17. Select **Voice / Stations / Ring Groups** from the NetVanta 7100 menus.

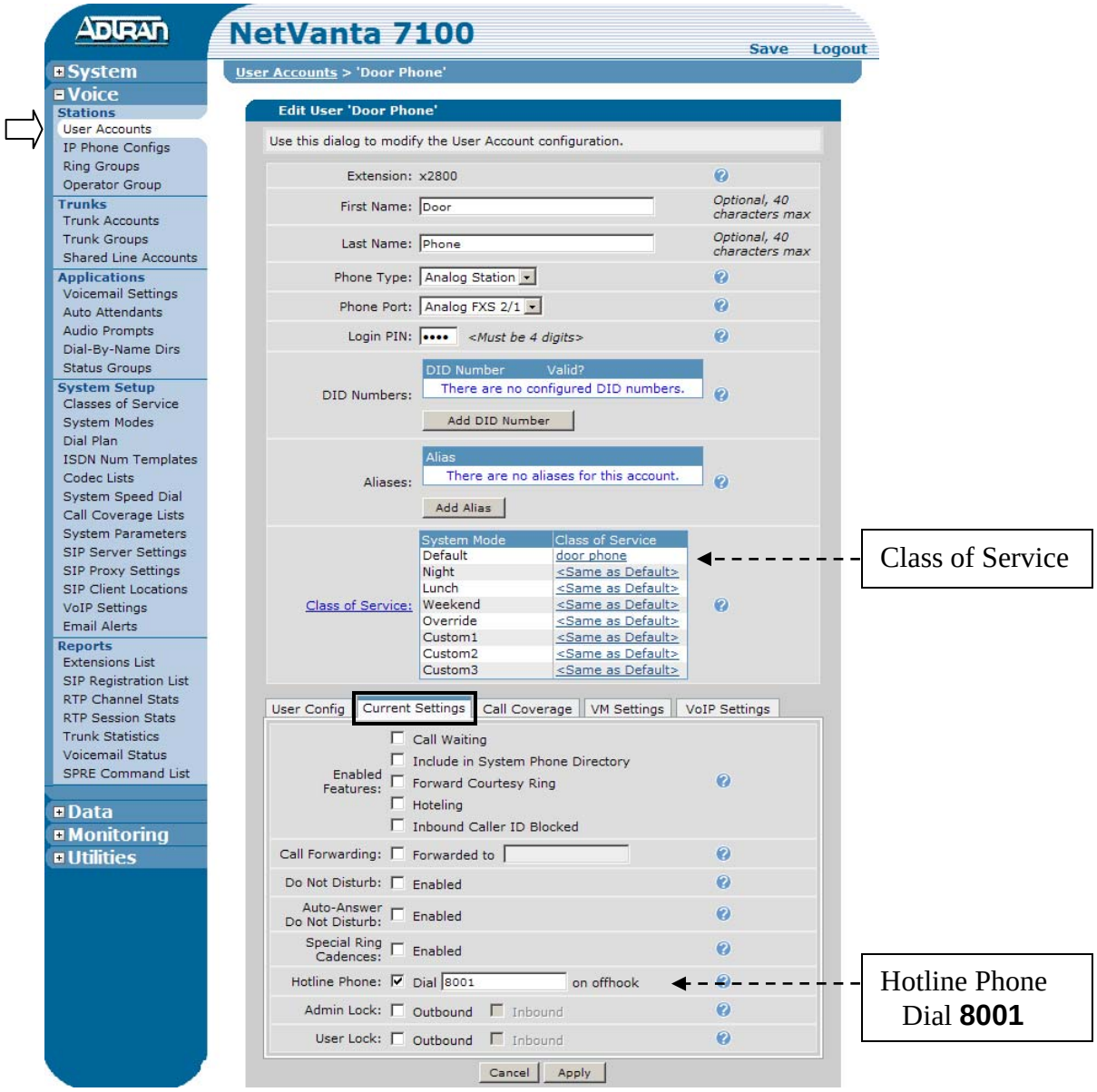
18. Create ring group **8001** with the settings shown below:



New Ring Group Settings

Ring Group Ext:	**8001**
Description:	**Hunt**
Ring Group Type:	**Linear Hunt Group**
Members:	**2003** & **2004**
Call Coverage:	**Ring 2 times, and then go to Operator**

19. Using the settings shown below, create a **new** Analog Station User Account with an extension of **2800** for use with the door phone.



Door Phone User Account

Extension:	**2800**
First Name:	**Door**
Last Name:	**Phone**
Phone Type:	**Analog Station**
Phone Port:	**Analog FXS 2/1**
Class of Service:	**door phone**
Hotline Phone:	**Enabled – Dial 8001** (ring group #)
Current Settings tab:	**Disable all settings except Hotline**

Modify the Operator Group

For this lab, Ext 2003 will be assigned to retrieve calls when a caller dials “0”.

20. Delete Ext 2001 & Ext 2002 from the Operator Group. This is part of the “Default” configuration.

21. Add Ext 2003 as the only member in the Operator Group.

22. Save your configuration.

Q: How does a voice user log out of a ring group or operator group?

_____

AUTO ATTENDANT CALL HANDLING

Inbound calls go to the Auto Attendant and then the calling party enters the extension of the inside user. In the following steps, you will enable "debug voice summary" and view the output while placing the calls.

You may want to read through the following steps before placing calls.

23. From the "Enable Mode" of the Command Line Interface, enter the debug voice summary command. View output while placing call below.

IPT# **debug voice summary**

The  symbol represents a call made from **your own phone** into the **NetVanta IP Telephony Course Auto Attendant**.

24. Call your IPT lab site and enter 2004 when asked for extension.

1. Dial  1-256-665-9214
2. Enter Pass Code for Student Auto Attendant (*your 4 digit passcode*)
3. Press 1 to place call into your first Analog Trunk

   Call is initiated inbound on the first Analog trunk to the Auto Attendant (8200)

4. Enter **2004** when asked for extension.

   Call is sent to voice user 2004. Call coverage is configured to "Go to Voicemail" after 4 rings.

5. Press '**0**' for operator as soon as call enters Voicemail. "DO NOT" leave message.

   Call is sent to the Operator Group. Since user 2003 is the only member of this group, call goes to user 2003.

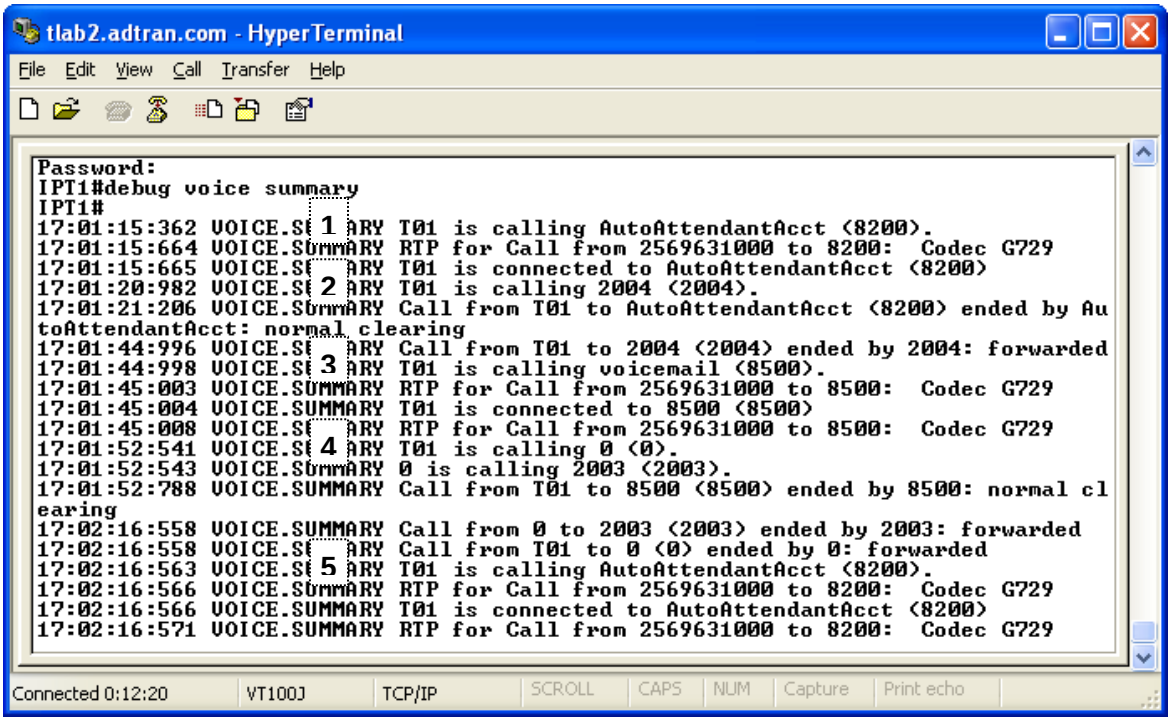
   The Operator Group Call coverage is configured to "Go to Auto Attendant" after 4 rings.

6. Hang-up phone after watching debug output of the call flow above.

Debug Voice Summary Sample Output

The output shown below is from the steps just completed.

1. Inbound call to Auto Attendant (8200)
2. User enter 2004
3. Call Coverage for user 2004 goes to Voicemail
4. “0” for the Operator is pressed while in Voicemail
5. Call Coverage for the Operator Group goes to the Auto Attendant



25. Turn off debug.

IPT# **undebug all**

Q: What is the default Auto Attendant extension?

_____

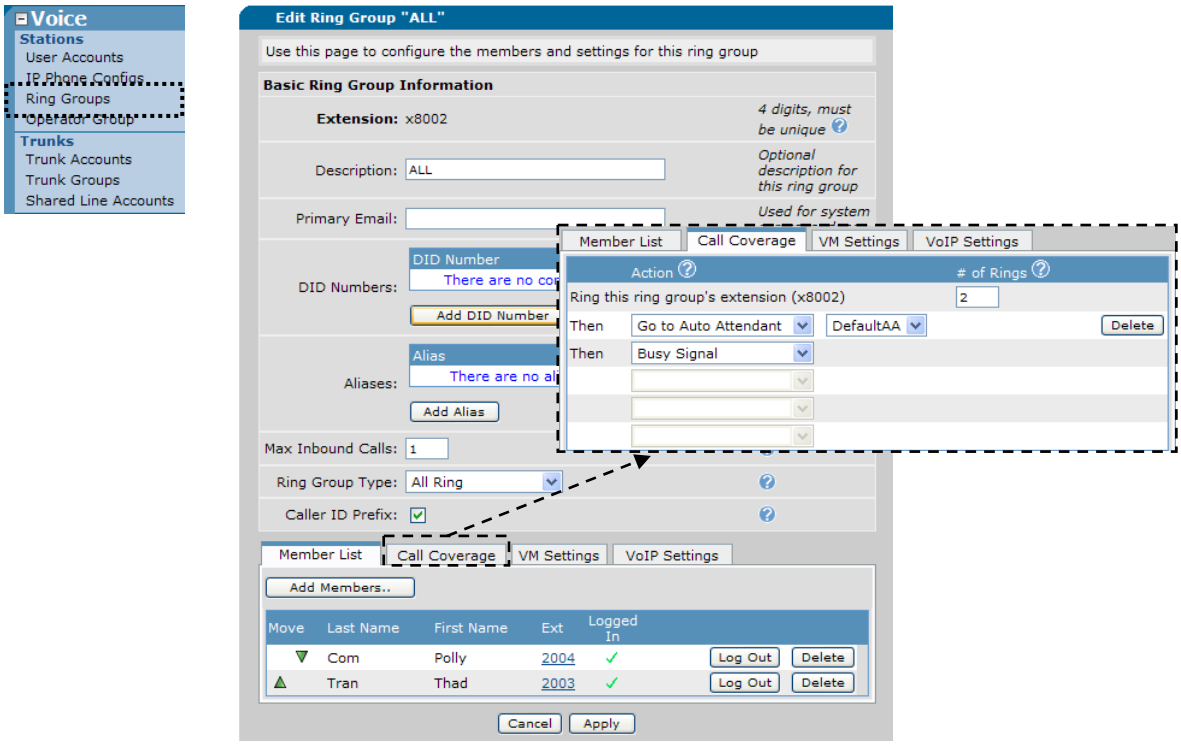
Q: With a factory default NetVanta 7000, what happens with an inbound call on an Analog trunk?

_____

RING GROUP CALL HANDLING

In this scenario, the customer would like incoming calls to ring several phones and then go to the auto attendant if no one picks up.

26. From the **Voice** / **Stations** / **Ring Groups** menu, create the second ring group **8002** with the settings shown below:

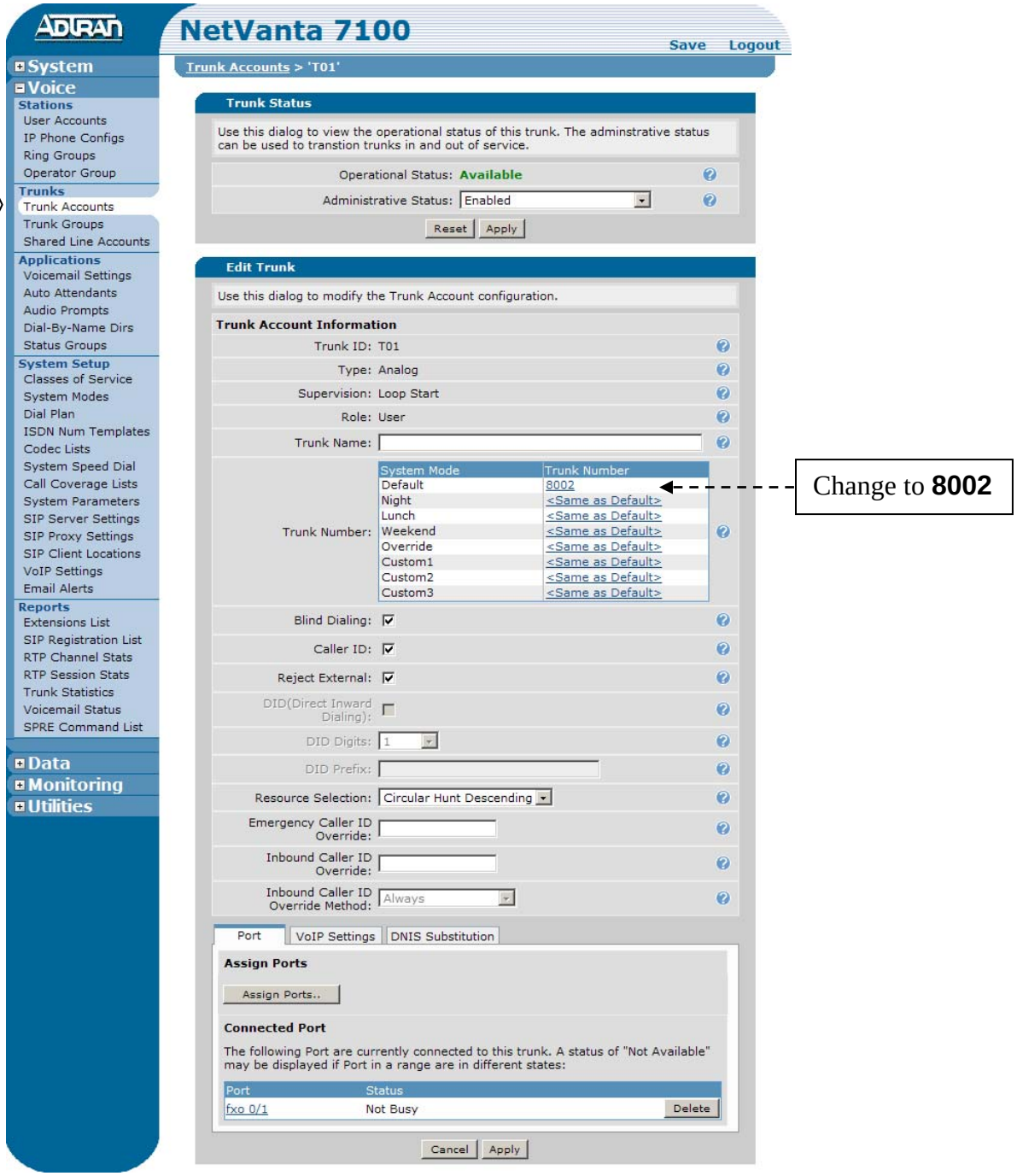


New Ring Group Settings

Ring Group Ext:	**8002**
Description:	**ALL**
Ring Group Type:	**All Ring**
Members:	**2003** & **2004**
Call Coverage:	**Ring 2 times, and then go to Auto-Attendant**

27. Select **Voice** / **Trunks** / **Trunk Accounts** from the NetVanta 7100 menu.

28. Edit Trunk Account **T01**. Change the 'Trunk Number' option to the new Ring Group extension **8002**. (*Inbound calls will now go to Ring Group 8002*)



Q: What is the purpose of the Trunk Number option found on this screen?

29. From the "Enable Mode" of the Command Line Interface, enter the debug voice summary command. View output while placing call below.

IPT# **debug voice summary**

The symbol represents a call made from **your own phone** into the **NetVanta IP Telephony Course Auto Attendant**.

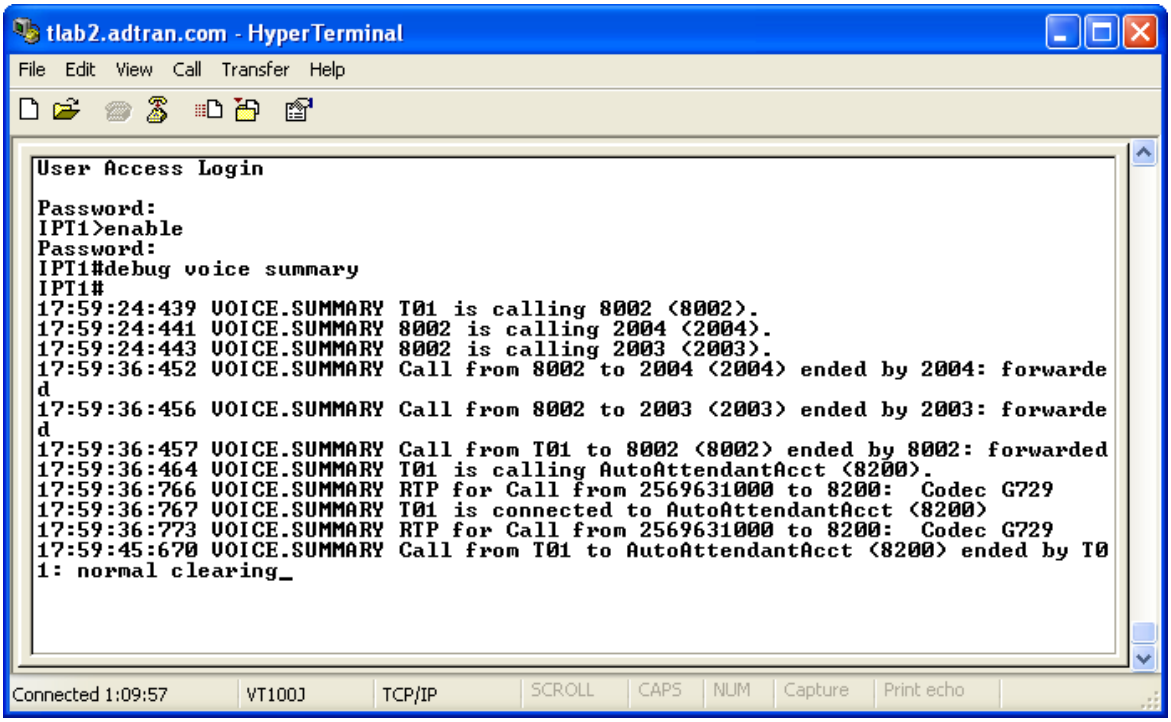
30. Call your IPT lab site and confirm proper routing on inbound calls.

1. Dial 1-256-665-9214
2. Enter Pass Code for Student Auto Attendant (*your 4 digit passcode*)
3. Press 1 to place call into your first Analog Trunk

   Call is initiated inbound on the first Analog trunk.

4. Hang-up phone after watching debug output.

Debug Voice Summary Sample Output



Q: What was the expected call flow in this example?

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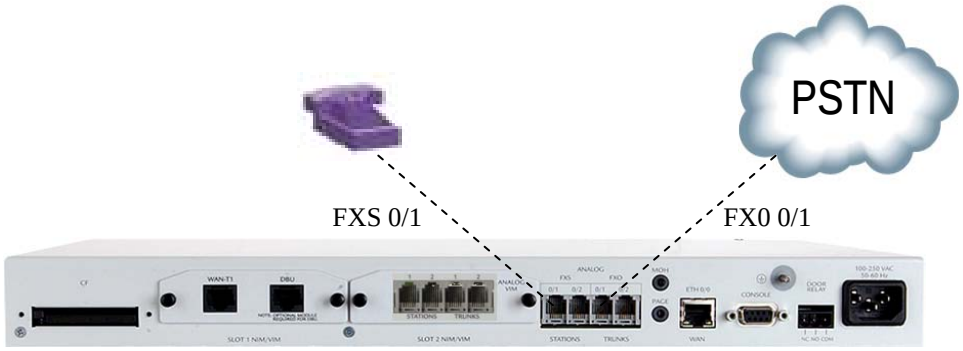
Q: What command is used to turn off all debug commands?

_____

31. Turn off all debug commands

Power Failover

The NetVanta 7000 provides survivability and power failover protection which maintains a PSTN link in the event that power is lost. The two integral analog station ports will failover to the two integral analog trunk ports.



Q: If power is lost, does the customer need to dial a '9' when placing calls?

_____

32. Save your configuration.

33. From the enable mode of the **CLI**, type the following to create a backup copy of the running configuration to a file called **lab2** stored in FLASH.

IPT# **copy running-config lab2**

Optional: Save a copy of the lab configuration to your PC. From the **Utilities** / **System** / **Configuration** menu of the NetVanta 7100, select **Download**. Click the **Include Voice Settings** checkbox to include both startup-config and dynvoice-config in your backup configuration.

LAB COMPLETE!