

This quick configuration guide explains how to configure handset paging for NetVanta 7000 Series products. Handset paging is a feature that provides paging to select groups of people through their IP phone handset. Unlike traditional overhead paging, most often used with private branch exchange (PBX) systems, handset paging is a more cost-effective way to communicate with select groups of people or individuals in small-to-medium size business environments. Handset paging works through a one-way audio transmission received as a call on individual IP phones.

Handset paging works with the following IP phones:

- ADTRAN IP 700 Series phones
- Polycom IP 300, 400, 500, 4000, and 6000 Series phones

IP phones used with handset paging must support the following:

- Hands free auto answer (HFAA)
- A speaker phone

IP phones used with handset paging will find the following features useful:

- Programmable keys
- LCD display

Handset paging is configured by the system administrator who is responsible for adding, removing, and modifying the paging permissions for users who will be using the paging feature. This guide is structured to aid the system administrator in configuring the handset paging feature using the Web-based graphical user interface (GUI). The following topics are covered in this guide:

- *Handset Paging Functionality and Limitations* on page 2
- *Handset Paging Operation* on page 2
- *Handset Paging Configuration* on page 4
- *Denying Paging Permission* on page 11

Handset Paging Functionality and Limitations

Using the handset paging feature on an IP phone requires the feature to operate in a specific way. The following are high-level characteristics of this feature:

- Do not disturb (DND), call forwarding, and voicemail take precedence over an incoming page. This means that the page will not connect if DND, or call forwarding are enabled on the receiving handset, or if the receiving handset is configured to go straight to voicemail.
- Handset paging can use the busy lamp field (BLF) key on ADTRAN phones (or the Line/BLF key on other phones) to initiate a page with a single press of the button, or a page can be initiated by dialing the extension or entering the number as a new call.
- When two people try to page the same paging group at the same time, handset paging uses a first-in first-out (FIFO) approach. The first person attempting the page will connect; the second person will receive a busy signal.
- The handset paging feature allows users to page multiple paging groups at the same time.
- The name and telephone number of the page initiator are forwarded to the page group. This information is displayed on the page recipient's LCD screen, if available.
- G.729 CODEC is recommended for handset paging.
- Handset paging is available to any user: whether local, remote, or offsite.
- Handset paging supports 16 simultaneous page receivers at one time.

The following phone applications are not supported by handset paging:

- Shared lines cannot initiate a page from the second call appearance.
- A paging group call cannot be put on hold. In this case, the page is disconnected.
- A paging group call cannot be transferred. In this case, the page is disconnected.
- ALIAS
- Direct inward dialing (DID)
- Session Initiation Protocol (SIP) identities
- Caller ID configuration
- Realtime Protocol (RTP) settings (ALC, NLS, PLC, etc.)
- Preferred CODECs

Handset Paging Operation

Handset paging operates by using IP phones through the NetVanta 7000 Series product. These handsets can be remote, local, or offsite. A page is initiated by any system user and sent to the members of the paging group. Paging groups are defined and organized by the system administrator.

When a page is initiated, the user selects the BLF or line key assigned to the particular paging group or dials the paging group extension. The page is sent to the selected group as a one-way realtime call, and attempts to connect to the page receivers. The page attempts to connect for a specified amount of time (the paging timeout) before the message is delivered. If no connections are made before the timeout period has expired, the NetVanta 7000 Series product ends the call. If page receivers are already on the phone, the page comes in as a second call. If page

receivers have DND or call forwarding enabled, or their phone is set to voicemail, the page does not connect to that handset.

The page initiator receives different tones depending on the connection status of the page. One tone signals that everyone has connected to the page before the feature timed out, indicating the initiator can begin the message. A second tone signals that either at least one recipient has denied the page, but others have connected before the timeout, or that at least one recipient has not connected before the timeout (whether due to page rejection, DND, call forward, etc.). If no one receives or connects to the page, the NetVanta 7000 Series product ends the call.

Pages that are successfully connected appear in the **Received Calls** list on the IP phone. Pages that are not successfully connected appear in the **Missed Calls** list on the IP phone.

Pages can also be initiated and received across remote and branch offices. Pages can be used across networked NetVanta 7000 Series units most easily when users are connected to local units that use a centralized NetVanta 7000 Series unit for their PBX functionality.

Pages can also be completed across decentralized NetVanta 7000 Series units, but these pages should be configured by paging group so that voice users always initiate and receive pages on their local unit. For example, if voice users **A**, **B**, and **C** are on unit **7100-1** and users **X**, **Y**, and **Z** are on unit **7100-2** and you want to configure a group that pages all users for both 7100's, you would configure the following:

On **7100-1** configure two paging groups (**PG1** and **PG2**):

PG1

- member A
- member B
- member C

PG2

- member PG1
- member PG3

On **7100-2** configure two paging groups (**PG3** and **PG4**):

PG3

- member X
- member Y
- member Z

PG4

- member PG1
- member PG3

In this scenario, users **A**, **B**, and **C** only call **PG1** and **PG2** and users **X**, **Y**, and **Z** only call **PG3** and **PG4**. Thus, paging is completed across decentralized NetVanta 7000 units by using a configuration in which voice users always initiate and receive pages on their local unit.

Handset Paging Configuration

Use the GUI to configure general handset paging parameters, including the extension for the page group, the description of the page group, the members of the page group, the page timeout, and enabling/disabling handset paging and overhead paging for the group. To configure these parameters of handset paging, follow these steps:

1. Open a GUI session. If you need assistance, follow the steps in the *NetVanta 7000 Series Web GUI Quick Configuration Guide* available on the *AOS Documentation* CD shipped with your unit or online at <http://kb.adtran.com>.

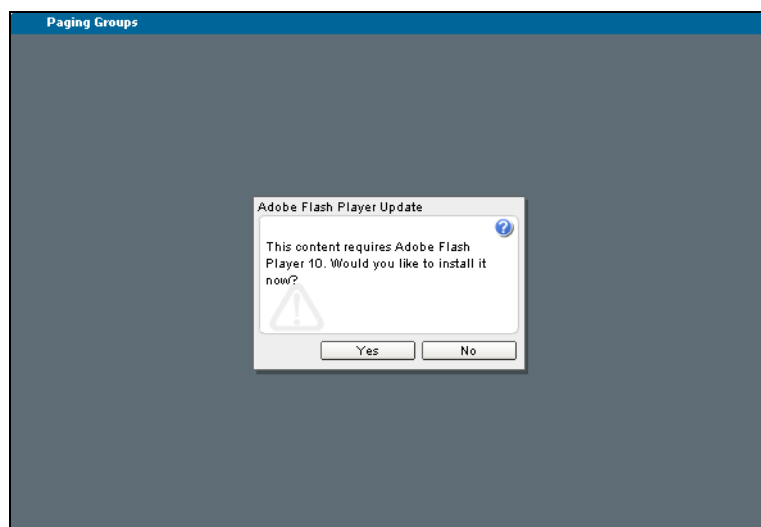


*Updated configurations must be saved to nonvolatile memory (NVRAM) to retain new changes after a loss of power or a reboot. To quickly save your configuration at any time while in the GUI, select **Save** at the top right of your current menu.*

2. Navigate to **Voice > Paging Groups**.



3. Download Adobe Flash Player, if necessary.



- After downloading Adobe Flash Player, you see the **Paging Groups** menu.

The screenshot shows the 'Paging Groups' interface. At the top, there are tabs for 'Paging Groups', 'New', 'Edit', 'Delete', 'Copy', and 'Refresh'. Below the tabs is a table with the following data:

	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	8923		2			G729

At the bottom of the interface, it says '2 groups' and 'Manage Columns'.

- To add a new paging group, select **New** from the top left of the menu. You will be prompted to enter the parameters of the new paging group.

The screenshot shows the 'New' form in the 'Paging Groups' interface. The form has the following fields and options:

- Extension:** 7576
- Description:** Tech Support
- Include Overhead Paging Port**
- Enable Paging Group**
- Timeout:** 2
- Codec:** G729

At the bottom of the form are 'Create' and 'Cancel' buttons. Below the form is a table with the same data as the previous screenshot:

	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	8923		2			G729

At the bottom of the interface, it says '2 groups' and 'Manage Columns'.

- Enter the extension for the new group in the **Extension** field. This is the extension that is assigned to the BLF or line key.
- Enter a description for the paging group in the **Description** field. Descriptions can be up to **80** characters.
- Select the box to enable overhead paging for this group. Enabling overhead paging means that pages for this group can also be sent using an overhead paging system.
- Select the box to enable the paging group. The paging group is disabled by default, and no pages can be made or received to or from this group.
- Enter the paging timeout value in the **Timeout** field. By default, the page will timeout after **2** seconds. Timeout range is **1 to 10** seconds. The timeout value is the number of seconds page receivers have to connect to the page before information is broadcast.

- Verify the **Codec** value. CODEC **G729** is recommended for optimal bandwidth usage, but if page initiators or recipients do not support CODEC G.729, you can select from CODECs **G711u**, **G711a**, or **G722**.
6. When all the information for the new paging group is entered correctly, select **Create**. You will be notified that a new paging group has been created.

Paging Groups						
Paging Groups						
New	Edit	Delete	Copy	Refresh		
<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8923		2			G729

3 groups

Manage Columns

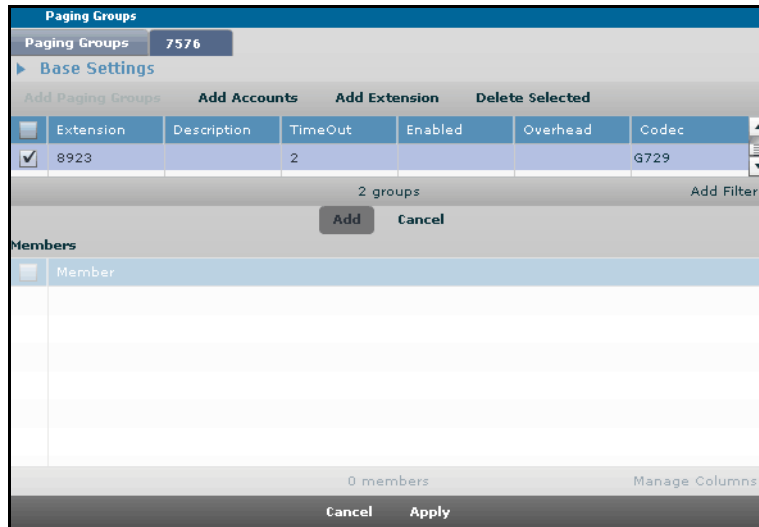
7. Once the new paging group has been created, you will need to add members to the paging group. To add members, select the box next to the appropriate paging group and select **Edit** from the top menu.

Paging Groups						
Paging Groups						
New	Edit	Delete	Copy	Refresh		
<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input checked="" type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8923		2			G729

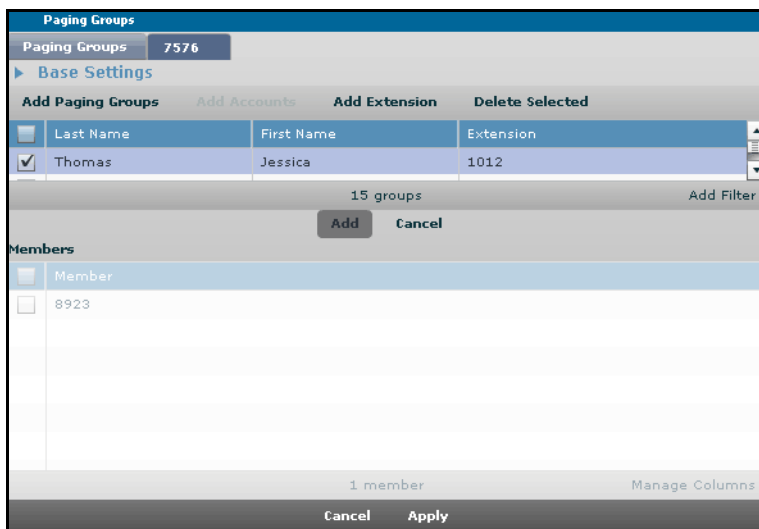
3 groups

Manage Columns

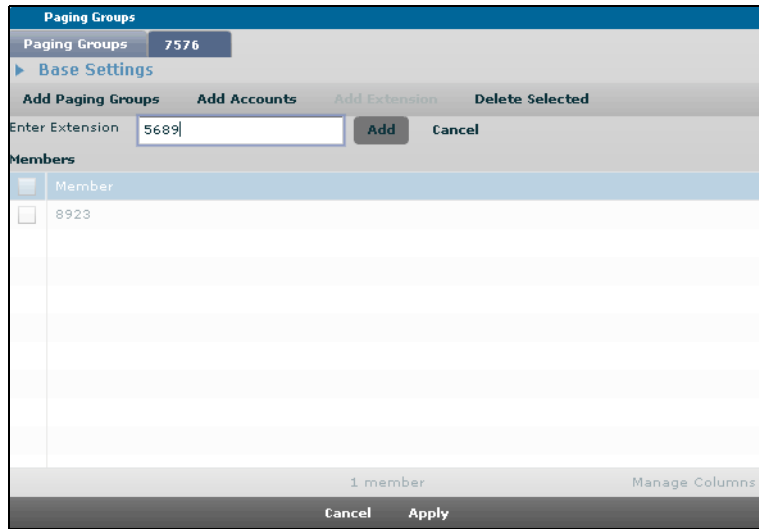
- Members can be added by selecting other configured paging groups, configured accounts, and configured extensions. To add members from other paging groups, select **Add Paging Groups** from the top menu and scroll through the configured groups. Select the desired group and select **Add**.



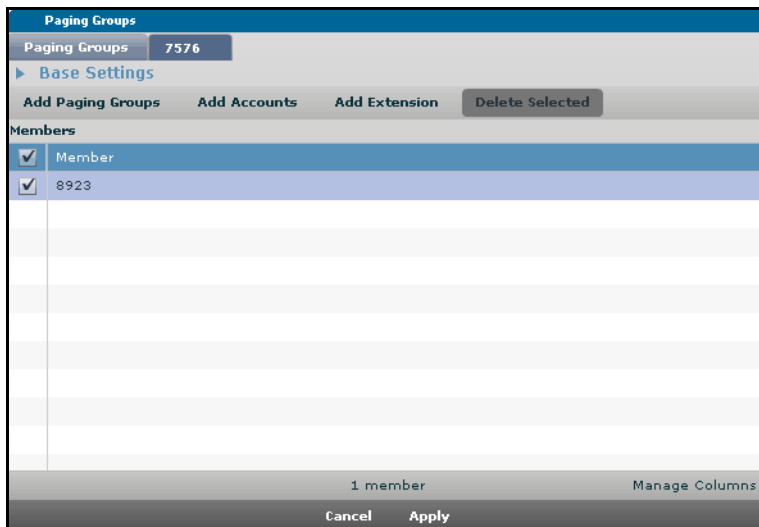
To add members from configured user accounts, select **Add Accounts** from the top menu and scroll through the configured accounts. Select the desired account and select **Add**.



To add members from configured user extensions, select **Add Extension** from the top menu and scroll through the configured extensions. Select the desired extension and select **Add**.



9. If you need to delete any members from the group, select the member from the **Members** list and then select **Delete Selected** from the top menu. Members can only be deleted on a per-group basis, unless the member has been removed from the entire system.



10. Once you have added the members to the group, select **Apply**. You will be notified that the paging group has been successfully updated.

Paging Groups						
Paging Groups						
New	Edit	Delete	Copy	Refresh		
<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8923		2			G729

3 groups Manage Columns

11. When configuring new handset paging groups, you can also copy configurations from existing groups. To copy a configuration from an existing group, select the group you wish to copy and then select **Copy** from the main **Paging Groups** menu.

Paging Groups						
Paging Groups						
New	Edit	Delete	Copy	Refresh		
<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input checked="" type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8923		2			G729

3 groups Manage Columns

You will be prompted with the previously configured group's parameters. Change the extension number or description as necessary. Select **Create** when the information is correct.

Paging Groups

Paging Groups

New Edit Delete Copy Refresh

Extension 8856 ?

Description engineeringB2 ?

Include Overhead Paging Port ?

Enable Paging Group ?

Timeout 2 ?

Codec G729 ?

Create Cancel

<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input checked="" type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8923		2			G729

3 groups Manage Columns

12. To delete entire groups, select the group from the list using the check box, and then select **Delete**.

Paging Groups

Paging Groups 7576 8856 8923

New Edit Delete Copy Refresh

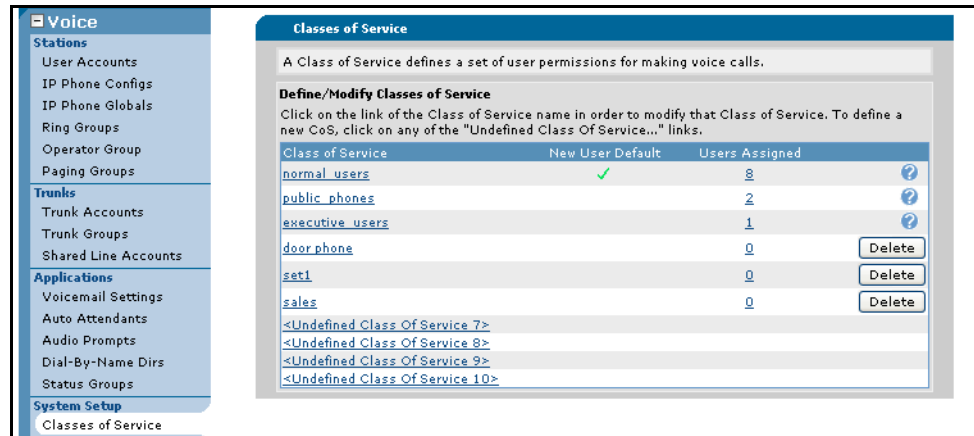
<input type="checkbox"/>	Extension	Description	Time Out	Enabled	Overhead	Codec
<input type="checkbox"/>	5678	engineeringB	2			G729
<input type="checkbox"/>	7576	Tech Support	2		✓	G729
<input type="checkbox"/>	8856	engineeringB2	2			G729
<input checked="" type="checkbox"/>	8923		2			G729

4 groups Manage Columns

Denying Paging Permission

By default, all handset paging group members are allowed to initiate paging calls if they are allowed to make internal calls. If you want to prevent a user from placing paging calls, you will need to deny calls for the user to the appropriate paging extension. To do so, follow these steps:

1. Navigate to **Voice > System Setup > Classes of Service**.



2. Create a new class of service (CoS) by selecting an **Undefined Class of Service**. There can only be **10** voice CoS permissions, so ensure you have enough resources to create a new deny CoS.

- Once you have selected an undefined CoS, you will be prompted to enter the **CoS Name**, an **Override Passcode**, **Permitted Call Types**, any **Advanced Permit/Deny Call Templates**, and **Basic Permitted Actions**.

The screenshot shows a web-based configuration interface titled "Modify Class of Service 'No paging'". The page includes a header with instructions, a "Basic Class of Service Information" section with fields for CoS Name, Override Passcode, and New User Default, a "Permitted Call Types" section with checkboxes for various call types, "Advanced Permit/Deny Call Templates" and "Auto-Answer Permit Templates" sections, a "Basic Permitted Actions" section with checkboxes for Overhead Paging, Forward External Call, and Unlock Door, and an "Advanced Permitted Actions" section. At the bottom are "Cancel" and "Apply" buttons.

In order to deny a particular paging group the ability to initiate desktop paging, you must create an **Advanced Permit/Deny Call Template** that denies internal calls for that paging group's extension. For example, if the paging group extension is **8400**, you can create a deny template for **8400**. If you need instructions on configuring CoS templates, refer to the *NetVanta 7000 Series Classes of Service* quick configuration guide. This guide is available on the the *AOS Documentation* CD shipped with your unit, or available online at <http://kb.adtran.com>.