Various levels of logging determine what constitutes an event and, therefore, what types of information are actually recorded. For troubleshooting purposes, you would want a very detailed record of occurrences within the MTA; hence, you would set a high logging level. Normally, however, you want to log only critical events. So set a lower logging level for everyday operation.

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CHAPTER 15

Information Store Configuration

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The Microsoft Exchange information stores (public and private) are the databases that hold all Microsoft Exchange messaging information. In addition, the information store is the primary storage system for information relevant to users, including messages, server-based mailboxes and their contents, public folders and their contents, private folders that are stored on a server instead of on a user's computer, documents, forms, and user-defined items.

Understanding Important Information Store Concepts

Understanding the following concepts will be helpful to you as you proceed through this chapter:

- *Top-Level Folder.* A public folder created at the highest point in the public folder directory tree. Usually only certain individuals in an Exchange organization (as assigned by the Permissions Administrator) are granted the right to create folders at the top of the hierarchy.
- *Public Folder Instance.* A replica of a public folder on a site other than the one on which it was created. Users can then connect to the local site's instance of the folder instead of crossing site boundaries (and adding to network traffic) to connect to a remote site.
- *Public Folder Affinity.* When a user in a local site needs to connect to a public folder that's only available on a remote site, the choice of connection is based on the costs assigned to the site containing replicas of that folder. Users need appropriate Windows NT security rights to access the actual Windows NT server on the remote site, and of course, they need access rights to the Exchange public folder itself.
- *Information Store Message Tracking.* The information store is responsible for transferring messages between two users on the same Exchange server. To keep a record of information store message transfer activity within a Microsoft Exchange server, you enable the message tracking feature. This generates a daily log file that's stored in the EXCHSRVR\TRACKING.LOG directory. The individual log files are named using this format: *YYMMDD*.log. For example, a log file for information store activity on June 11, 1997 would have the name 970611.log.

Information Store Site Configuration

Settings made on the Information Store Site Configuration properties sheets affect all servers within an Exchange site. When first setting up an Exchange site, you should configure these properties sheets.

Open the Site Configuration properties sheets by completing the following steps:

1. Navigate to your desired site with the Exchange Administrator program, and then expand the site container.
2. Highlight the Configuration container (see Figure 15.1) of the selected site. All the site configuration objects appear in the right pane of the Administrator program window.

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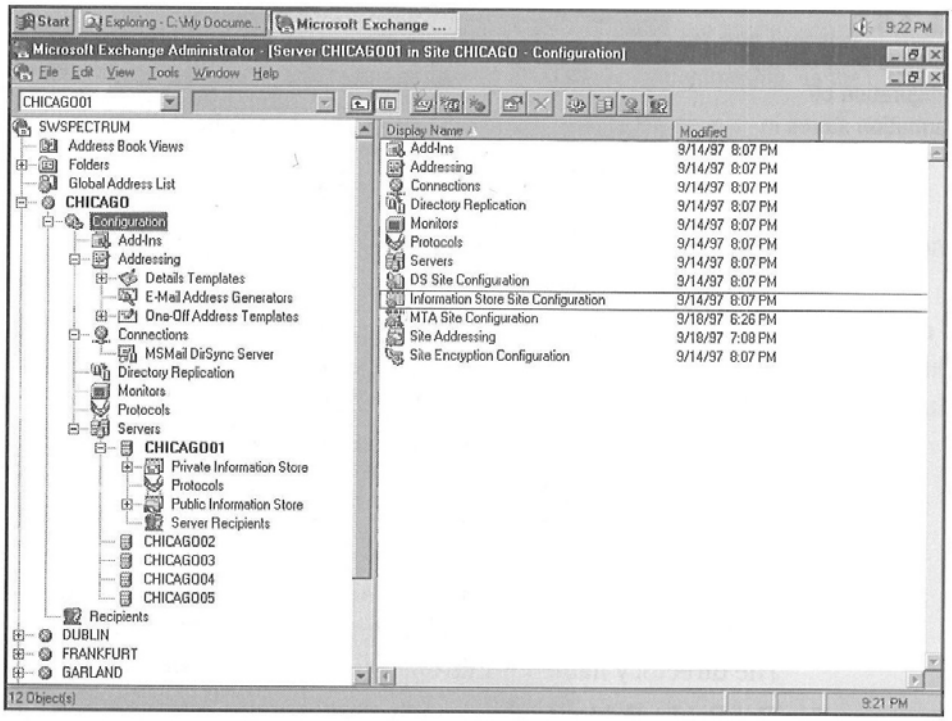


FIG. 15.1
The Configuration container holds all site configuration objects.

3. Select the Information Store Site Configuration object from the list.
4. Double-click the object to open its properties sheet.

At this point there will be five pages of the properties sheet to configure:

- *General.* Set display name, public folder container, and toggle message tracking.
- *Permissions.* Set access right to the Information Store Site Configuration directory object.
- *Top Level Folder Creation.* Define which users are allowed to create public folders at the highest level of the public folder directory tree.
- *Storage Warnings.* Schedule when notification messages about exceeded storage space are sent to those users in violation of set restraints.
- *Public Folder Affinity.* Configure connections to public folders in remote sites.

The General Page

On the General page, you can set up a default container for public folder creation, as well as enable message tracking for the entire site.

Complete the following steps to change settings on the General page:

1. Select the General tab of the Information Store Site Configuration properties sheet. The page in Figure 15.2 appears.

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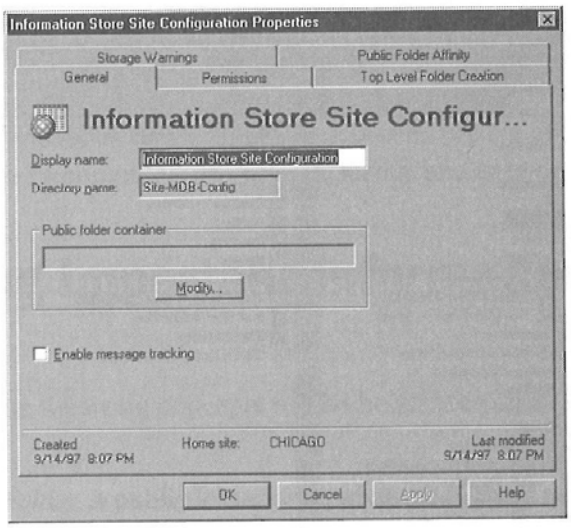


FIG. 15.2
This page controls the configuration of information stores in the site.

2. If desired, type a new Display Name as you want it to appear in the Microsoft Exchange Administrator program. By default this name is Information Store Site Configuration. The directory name for this object is Site-MDB-Config by default; it cannot be changed.
3. The Public Folder Container box displays the recipient container in which the public folders directory entries for this site are stored. By default, this box is blank, and public folders are stored in the standard recipients container. To change that, click Modify to access a dialog box with a list of all available recipient containers within this site. Then select a container and click OK.
4. Click the Enable Message Tracking check box to instruct the information store to keep a daily log file about all messages processed by the information store. All messages that are destined for a local recipient are delivered by the information store. This button corresponds with the Enable Message Tracking check box on the MTA Site Configuration properties sheet and enables use of the Message Tracking tool in the Exchange Administrator program.
5. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

The Permissions Page

On this page, you can define certain Windows NT user accounts that have rights to modify this directory object. See Chapter 12, "Using the Administrator Program," for details on working with the standard Permissions properties.

The Top-Level Folder Creation Page

With the settings on this page, you can either deny or allow certain users the ability to create public folders on the highest level of the public folder hierarchy.

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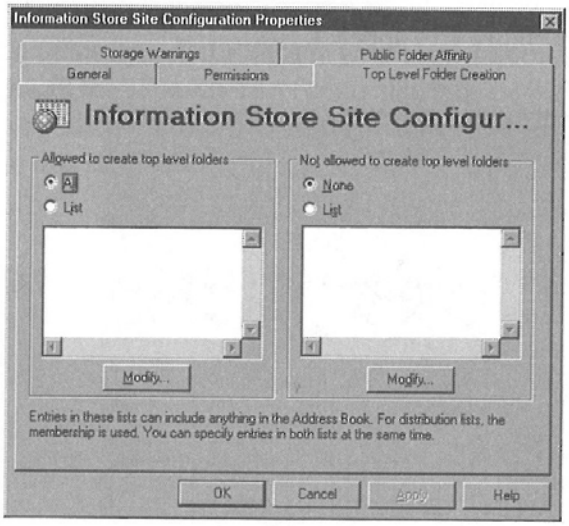
NOTE You can also deny or allow rights to all users on a specified distribution list, and Exchange will determine top level folder creation permission based on the list's membership. As the members of the distribution list are modified, so are the permissions set here. ■

Complete the following steps to configure the Top Level Folder Creation properties:

1. Select the Top Level Folder Creation tab from the Information Store Site Configuration properties sheet. The page shown in Figure 15.3 appears.

   The Allowed to Create Top Level Folders box lists the recipients who have been given specific permission to create these folders. The Not Allowed to Create Top Level Folders box lists the recipients specifically denied permission to create these folders. By default, all users can create top level folders.

FIG. 15.3
Selectively assign top level folder creation rights from this page.



2. Click the Modify button under either box if you want to add recipients to or delete recipients from the list. A standard address list dialog box appears.
3. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

NOTE In most Exchange organizations, the default of allowing anyone to create top level public folders is not preferred. Most Exchange administrators limit top level creation to a select list or distribution list soon after creating a new site. ■

The Storage Warnings Page

With the controls on this page, you can schedule when information store will send out storage warnings. You set the actual storage limits in the following properties sheets for each corresponding recipient type:

- *Mailboxes.* Set limits for each individual user or set a global storage limit for all mailboxes on a particular server using the Mailbox Advanced page of the Private Information Store properties sheet.
- *Public Folders.* Set limits for each individual folder or set a global storage limit for all public folders on a particular server using the Public Folder Advanced page of the Public Information Store properties sheet.

The Storage Warnings notification schedule actually initiates an automated process that evaluates the size of each message store object in the information store on each server in the site. If a server has a high number of mailboxes and public folders, this process can take up a fair amount of system resources as it runs.

Set the Storage Warnings notification schedule by taking these steps:

1. Select the Storage Warnings tab of the Information Store Site Configuration properties sheet. The page in Figure 15.4 appears.

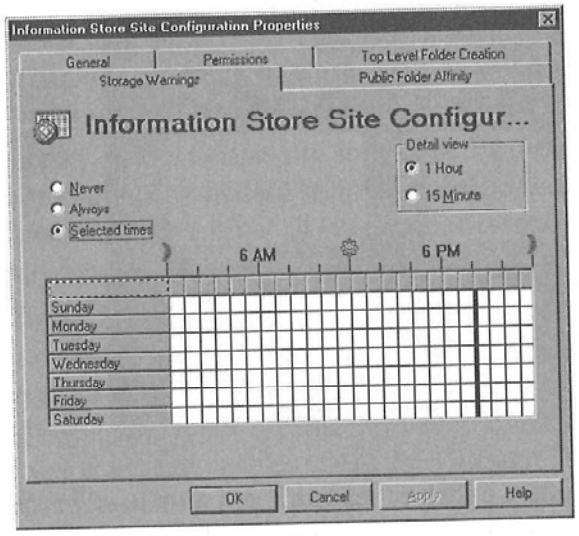


FIG. 15.4
Set the Storage Warnings notification schedule.

2. Select one of the three option buttons that determine when recipients are notified:

   Never. This effectively disables storage warning notification.

   Always. A storage warning notification is executed immediately when a storage limit is exceeded.

   Selected Times. Storage warning notifications are executed based on the time slots selected on this page.

TIP If you are using storage limits in a large organization, it is generally not a good idea to select Always and potentially overtax your servers during high usage. It is better to schedule a time or times when the messaging load is lower and have storage warnings sent at once.

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3. If you choose Selected Times, the Detail View option buttons become available. Select either the 1 Hour or 15 Minute detail view, and the time grid scale changes accordingly.
4. Also if you choose Selected Times, pick the time blocks for evaluations. By default, storage warning notifications are scheduled once per day beginning at 8 p.m.
5. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

The Public Folder Affinity Page

From this page, you can set up connections to public folders located in remote Exchange sites.

Complete the following steps to configure the Public Folder Affinity properties:

1. Select the Public Folder Affinity tab of the Information Store Site Configuration properties sheet. The page in Figure 15.5 appears.

   The Sites window lists all the sites in your organization. The Public Folder Affinity window lists all the sites where a connection may be established in order for a user to connect to a remote public folder. The Cost column displays the relative numeric value assigned to this site. As with message routing, the site with the lower cost will be used first.

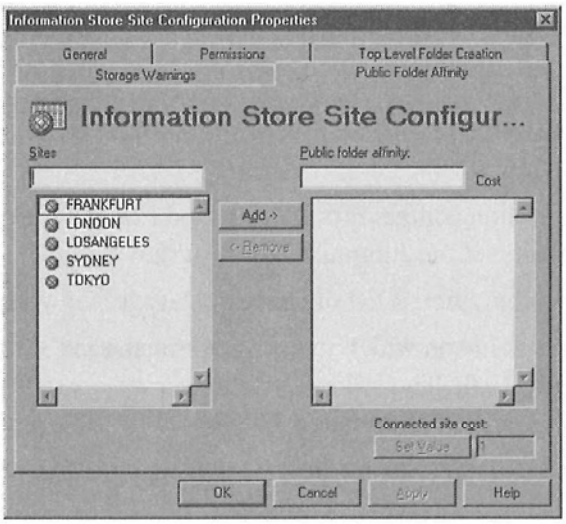


FIG. 15.5
Define the order in which a user connects to remote public folders.

2. To add a site, select it from the Sites window and click Add. To remove a site, select it from the Public Folder Affinity window and click Remove.
3. Enter the Connected Site Cost in the box in the lower-right corner. If the cost of the site is 0, this site will always be used first if it is available. The possible value for this cost field is 1–99. Sites will be used in numerical sequence with the lower valued sites used first. If the costs are equal between sites, the load will be distributed equally among those sites. If a cost of 100 is used, the site will be used only if no other site is available.

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4. Click Set Value to save the cost associated with the selected site.
5. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

Configuring Private Information Store

Now we will move on to configuring private information store properties on an individual Microsoft Exchange server. The private information store primarily holds data posted to user mailboxes and private folders, in addition to mail associated to some Exchange connectors, such as the Internet Mail Service.

There are four separate pages you will need to configure:

- *General.* Set global mailbox storage limits for this server; designate a public folder server.
- *Logons.* View a list of users' connections to the private information store.
- *Mailbox Resources.* View mailbox settings and amount of storage space used by each mailbox.
- *Diagnostic Logging.* Set logging levels for tracking down errors and debugging your organization.

First you must select the private information store from a server within your site. Do this by completing the following steps:

1. Navigate to your desired site with the Exchange Administrator program, and then expand the site container.
2. Expand the Configuration container of the selected site. All the site configuration objects appear in the right pane of the Administrator program window.
3. Expand the Servers container. A list of Exchange servers in your site will be listed.
4. Highlight the server name on which the private information store you want to configure is located (see Figure 15.6). The following list of server objects is visible in the right pane window of the Microsoft Exchange Administrator program.
5. Click the Private Information Store object. Open its properties sheet.

The General Page

From this page, you can set global storage size limits for mailboxes on this server. Also, you can specify a different Exchange server to be responsible for the public folders created by users on this server.

Complete the following steps to configure the Private Information Store General properties:

1. Select the General tab of the Private Information Store properties sheet. The page in Figure 15.7 appears.

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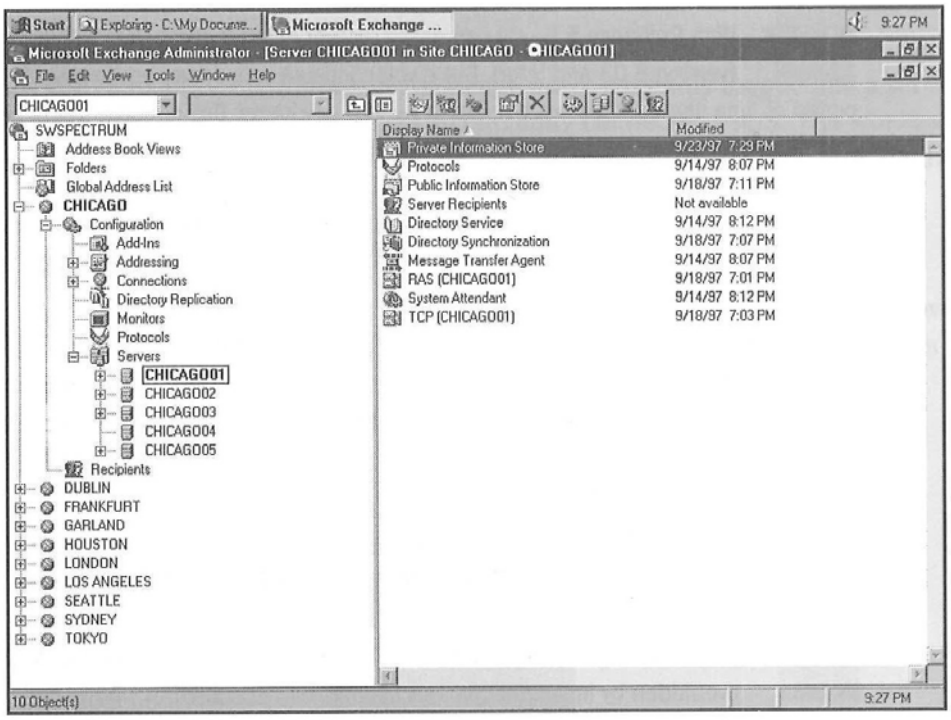


FIG. 15.6
The private information store holds all mailbox data of users on the local server.

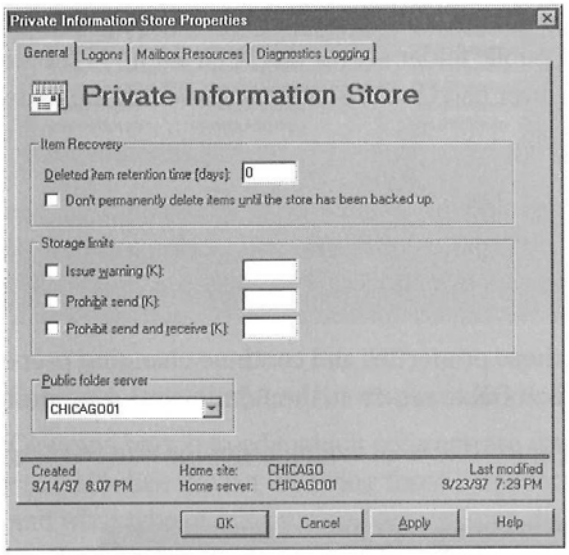


FIG. 15.7
The settings on this page apply to all mailboxes on this server.

2. Set the Deleted Item Retention Time (Days) for a period of time you would like to save deleted items. This is a new feature in Exchange 5.5. It enables you to control the period of time you want deleted mail to be saved so users can easily recover deleted mail if necessary using the Outlook client (version 8.03 and later). To save users' deleted items until the private information store is backed up, select the check box next to Don't Permanently Delete Items Until the Store Has Been Backed Up.

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NOTE With Exchange 5.5, you can easily recover deleted items from within the Outlook client (version 8.03 and later). But if you configure your server not to save deleted items for a period of time, the user will not be able to recover any items. This option is set to zero days by default; it must be configured in order for deleted mail to be saved.

3. Select the Issue Warning (K) check box and enter a value (in kilobytes) at which a mailbox owner will be warned that he is nearing storage limits. By default, no set value is entered.
4. Select the Prohibit Send (K) check box and enter a value (in kilobytes) at which a mailbox owner will be prohibited from sending any additional outgoing messages until some stored message data is deleted. By default, no set value is entered.
5. Select the Prohibit Send and Receive (K) check box and enter a value (in kilobytes). When the individual's mailbox reaches the size you specify, he will no longer be able to send or receive mail. When the user decreases the size of his mailbox to a size below what is specified, he will be able to receive mail again.

NOTE Issue Warning, Prohibit Send, and Prohibit Send and Receive limits set on this page are overridden by individual mailbox settings on each mailbox's Advanced page.

6. Under Public Folder Server, select the Exchange server in your site that will store public folders created by users with mailboxes on this local server. This is especially useful if a specific, dedicated public folder server has been set up in the site or location. By default, the public folder server used is the same one on which the folder was created—the current server.

NOTE If you select a server other than the local Exchange server, you are effectively separating that server's public and private information stores. Select a different server only if this complies with your overall load balancing plan for this Exchange site.

7. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

The message shown in Figure 15.8 is an example storage size warning message.

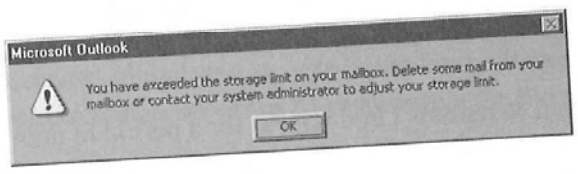


FIG. 15.8
This message appears when users exceed set storage limits for their mailboxes.

The Logons Page

This page enables you to monitor the Microsoft Exchange users currently logged into a server. It consists of one main display window that shows all currently connected users. The window is broken down into various columns of information. You can customize the columns both by the information shown and their widths on the screen.

Complete the following steps to view logon information:

1. Select the Logons tab of the Private Information Store properties sheet. The page shown in Figure 15.9 appears. The display window shows all users currently logged on to this Exchange server.

NOTE The Microsoft Exchange System Attendant is always listed in this window because the System Attendant is always logged in when the Exchanger Server is running. ■

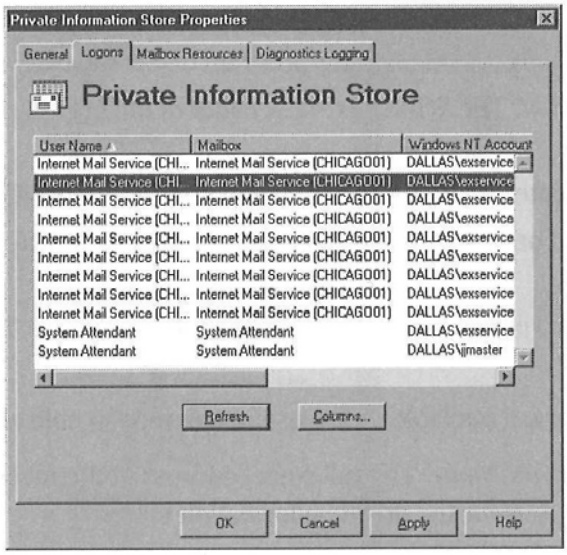


FIG. 15.9
View currently logged on users.

2. Click the Refresh button to update the display window with the latest information.
3. Click the Columns button to edit which columns are displayed and their widths in pixels (see Figure 15.10). See the list following these steps for a description of the column headings and what type of information each one can display.

NOTE Exchange 5.5 includes 12 additional measurements that can be used in the analysis of private folder use. ■

4. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

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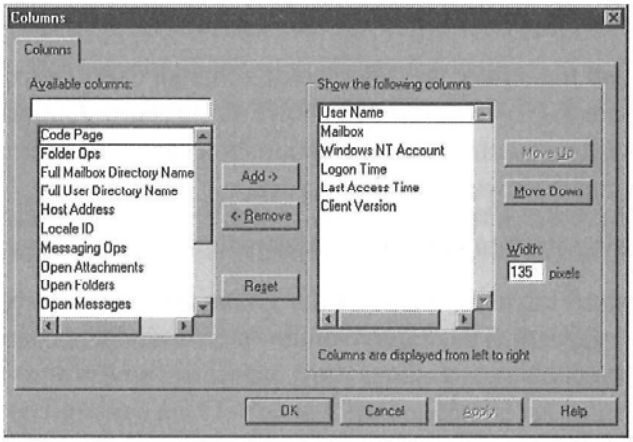


FIG. 15.10
Control the columns available for the Logons properties sheet.

The following are the default columns:

- *User Name.* The name (display name) for the user logged on to this mailbox.
- *Mailbox.* The Exchange Administrator program object's display name for this mailbox.
- *Windows NT Account.* The Windows NT account of the user currently logged on to this mailbox.
- *Logon Time.* The date and time the user logged on to Microsoft Exchange.
- *Last Access Time.* The last user to access the mailbox, as well as the time and date of the access.
- *Client Verison.* The version of the client that was used to log on to this mailbox or public folder.

Several optional columns are available. A few useful columns to note are:

- *Full Mailbox Directory Name.* The full e-mail address of the mailbox being accessed. This option is available only for the private information store.
- *Full User Directory Name.* The name of the mailbox that is accessing the private information store.
- *Host Address.* The Internet protocol (IP) address of the client.
- *Locale ID.* The locale ID for the language the client is using.
- *Messaging Ops.* The total number of messaging operations performed in the last 60 seconds, such as opening or closing a message.
- *Open Attachments.* The total number of open attachments.
- *Open Folders.* The total number of open folders.
- *Open Messages.* The total number of open messages.
- *Other Ops.* The total number of miscellaneous operations performed in the last 60 seconds.
- *Progress Ops.* The total number of progress operations performed in the last 60 seconds. Progress operations inform the user about how long it will take to complete a task.

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- *Stream Ops.* The total number of stream operations performed in the last 60 seconds, such as viewing or changing an attachment.
- *Table Ops.* The total number of table operations performed in the last 60 seconds, such as viewing the contents of a folder.
- *Total Ops.* The total number of operations performed in the last 60 seconds.
- *Transfer Ops.* The total number of transfer operations performed in the last 60 seconds, such as copying or moving a message.

To save valuable time, you can quickly view logon information from the main Exchange hierarchy. Figure 15.11 shows the path you take in the left pane of the Exchange Administrator program to get to the Logons item.

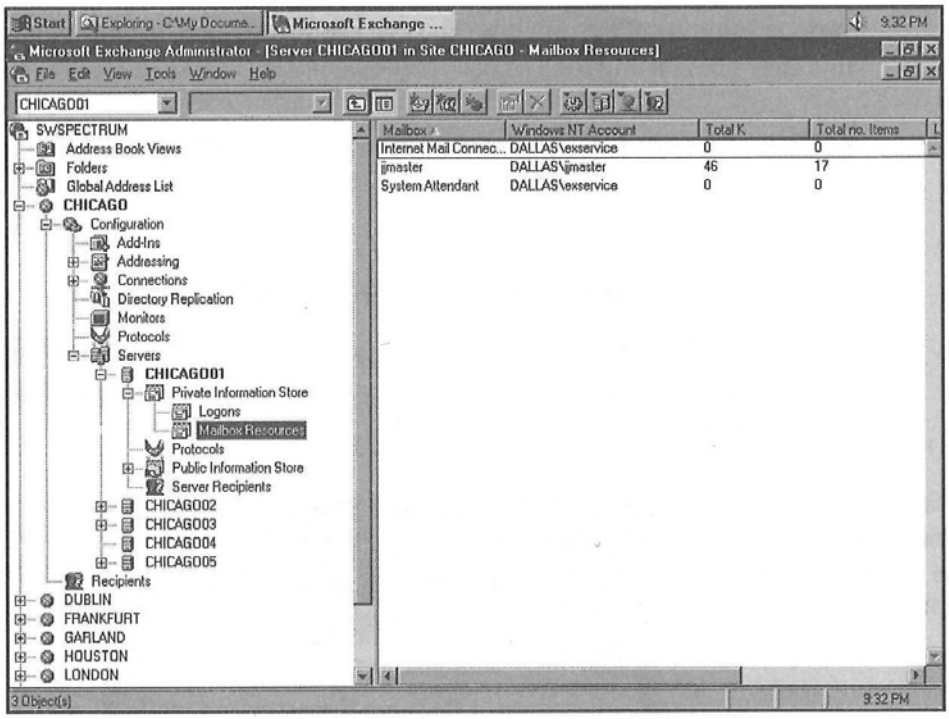


FIG. 15.11
Logon information is available in the left pane.

To access the logon information using this option, complete the following steps:

1. Navigate to your desired site with the Exchange Administrator program, and then expand the site container.
2. Click the small plus sign adjacent to the Configuration container of the selected site to further expand the hierarchy in the left pane.
3. Expand the Servers container in the left pane, and a list of Exchange servers in your site appears.
4. Click and expand the server name on which the private information store you want to configure is located.

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5. The displayed server objects now visible in the left pane of the Microsoft Exchange Administrator Program are identical in name and function to similar objects displayed in the right pane. Selecting properties of either the private information store or public information store displays the same data.
6. Expand the Private Information Store object in the left pane and click the Logons object to see the Logons information in the right pane. You can add to the default columns shown in the right pane by using the View menu and the Columns command.

The Mailbox Resources Page

Using this page, you can view the physical resources (such as the hard disk storage space) used by the Exchange mailboxes on the server. It consists of one main display window that shows the mailboxes and resources on the current server. The windows are broken down into various columns of information. You can customize the specific columns both by the information they present and their widths on the screen.

NOTE A mailbox will be displayed in this window only after the first time a user logs on to it. If the mailbox has never been used, it will not appear on the Mailbox Resources properties sheet page. ■

Complete the following steps to view the Mailbox Resources information:

1. Select the Mailbox Resources tab of the Private Information Store properties sheet. The page in Figure 15.12 appears. The display window shows all the mailboxes on this server that have been used at least once.

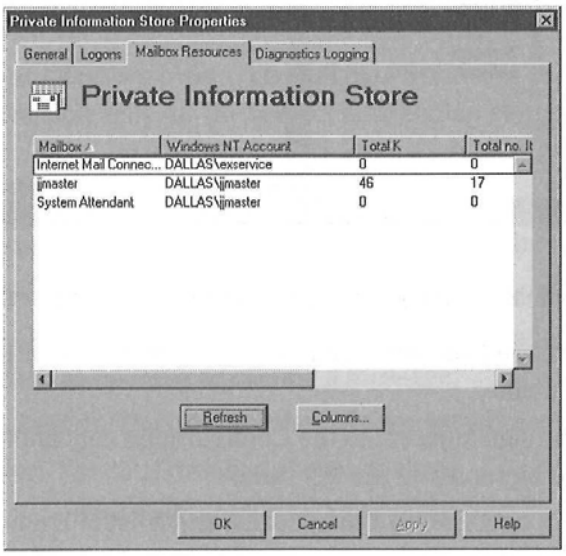


FIG. 15.12
View server resource use on a per-mailbox basis.

NOTE The Microsoft Exchange System Attendant is always listed in this window because the System Attendant is always logged in when the Exchanger Server is running. ■

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2. Click the Refresh button to update the display window with the latest information.
3. Click the Columns button to edit which columns are displayed and their widths in pixels (see Figure 15.13). See the list following these steps for a description of the column headings and what type of information each one can display.

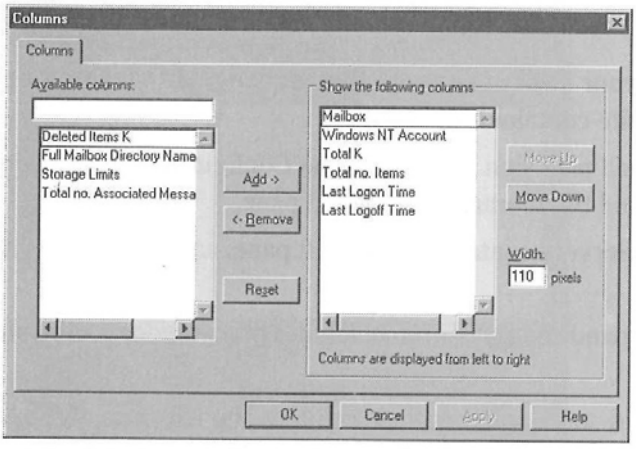


FIG. 15.13
Display columns available for the Mailbox Resources page.

4. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

These are the default columns:

- *Mailbox.* The Exchange Administrator program object's display name for this mailbox.
- *Windows NT Account.* The Windows NT account of the user currently logged on to this mailbox.
- *Total K.* The total amount of disk storage space (in kilobytes) taken up by the contents of this user's mailbox. This value includes message attachments.
- *Total Number of Items.* The sum of all messages and attachments stored in a mailbox.
- *Last Logon Time.* The last time a user logged on to this mailbox.
- *Last Logoff Time.* The last time a user logged off from this mailbox.

This page displays the full e-mail address for the mailbox and the total number of associated messages in this mailbox. The following are optional columns:

- *Deleted Items K.* The total amount of disk space in kilobytes occupied by retained, deleted items for this mailbox.
- *Full Mailbox Directory Name.* The entire X.400 e-mail address for this mailbox.
- *Storage Limits.* Any storage limits imposed on the mailbox (Prohibit Send, for example).
- *Total number of Associated Messages.* The sum of stored views and deferred action messages (messages scheduled to be sent/processed at a later time) in this mailbox.

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As with the Logons status screen (discussed earlier), Exchange 5.0 offers the capability to quickly view Mailbox Resources information from the main Exchange hierarchy shown in the left pane. Refer to Figure 15.11 to see the path you take in the left pane of the Exchange Administrator program to get to the Mailbox Resources item.

To access the Mailbox Resources information using this new option, complete the following steps:

1. Navigate to your desired site with the Exchange Administrator program, and then expand the site container.
2. Click the small plus sign adjacent to the Configuration container of the selected site to further expand the hierarchy in the left pane.
3. Expand the Servers container in the left pane, and a list of Exchange servers in your site appears.
4. Click and expand the server on which the private information store you want to configure is located.
5. The displayed server objects now visible in the left pane of the Microsoft Exchange Administrator program window are identical in name and function to similar objects displayed in the right pane. Selecting the properties of either the private information store or public information store displays the same data.
6. Expand the Private Information Store in the left pane, and then click the Mailbox Resources object to display the Mailbox Resources information in the right pane. You can add to the default columns shown in the right pane by using the View menu and the Columns command.

The Diagnostic Logging Page

The properties on this page work in conjunction with the Windows NT Event Log to record various events that occur within the information store. This page is identical to the one found on the Public Information Store properties sheet. Figure 15.14 shows the Diagnostic Logging page of the Private Information Store sheet.

Various levels of logging determine what constitutes an event and, therefore, what types of information are actually recorded. For troubleshooting purposes, you want a very detailed record of occurrences within the information store, so you set a high logging level. However, normally you should log only events that are critical, so you set a lower logging level for everyday operation.

Public Information Store/Public Folder Replication

The Public Information Store properties sheet pages are much more extensive than those of the Private Information Store because of public folder replication. To reiterate this concept, duplicates of public folders can be created to reside on Exchange servers in remote sites. This makes it possible for users based on the remote site to connect to the local copy of the public folder instead of crossing site boundaries to access the information, which reduces network

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traffic between site boundaries. Replication can also be used to duplicate folders on other servers in the same local Exchange site to offer redundancy and to maintain load distribution across servers.

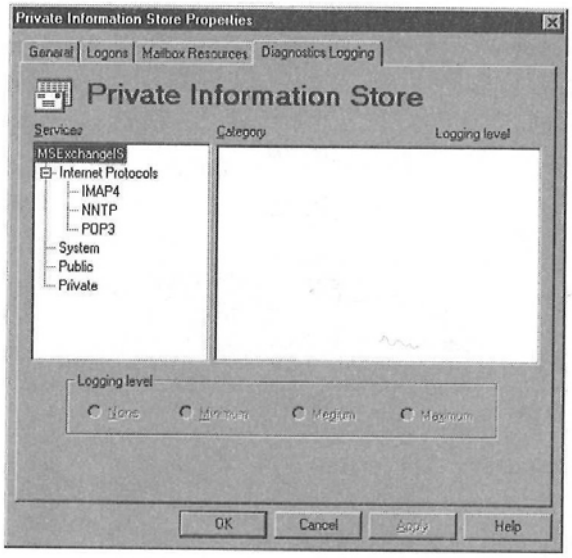


FIG. 15.14
Various events can be logged to the Windows NT Event Log.

The following are the Public Information Store properties sheet pages available on each Microsoft Exchange server:

- *General.* Impose a global storage limit warning for all folders in this public information store and set deleted item recover options.
- *Instances.* Select which public folders to replicate to the local server from remote sites.
- *Replication Schedule.* Set the times when public folders on the local server are replicated to the established remote instances.
- *Age Limits.* Set the lifetime of public folders or their contents.
- *E-Mail Addresses.* Define and modify various e-mail addresses for the public information store directory object.
- *Logons.* View data about users currently connected to a public folder.
- *Public Folder Resources.* View data about quantity of server resources consumed by a particular public folder.
- *Server Replication Status.* Monitor each server's participation in public folder replication.
- *Folder Replication Status.* Monitor the replication of individual public folders.
- *Advanced.* Define the replication cycle of public folders and define the maximum size of each individual replication message.
- *Diagnostics Logging.* Activate various levels of logging for troubleshooting purposes.

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The General Page

This page has only one option: to set a global issue warning for all public folders on the local Exchange server (see Figure 15.15).

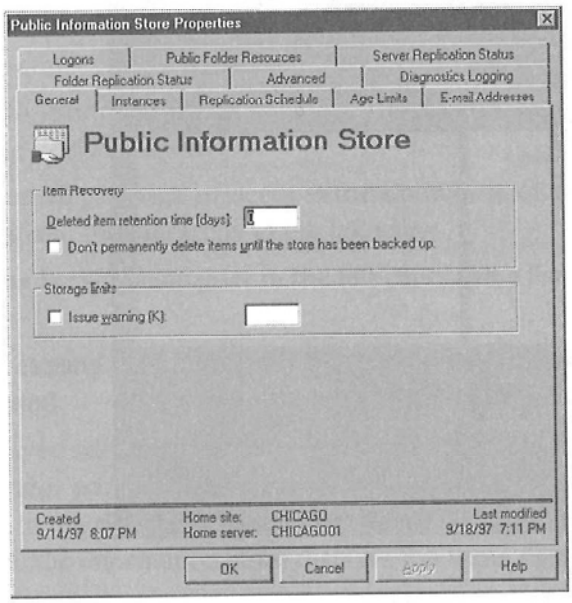


FIG. 15.15
Set the global (for all public folders on this server) public folder size warning and deleted item recovery options.

Complete the following steps to set the General properties:

1. Select the General tab of the Public Information Store properties sheet. The following page shown in Figure 15.15 appears.
2. Set the Deleted Item Retention Time (Days) for a period of time you would like to save deleted items. This is a new feature in Exchange 5.5. It enables you to control the amount of time deleted mail is saved so that users can easily recover deleted mail if necessary using the Outlook client (version 8.03 and later). To save users' deleted items until the private information store is backed up, select the check box next to Don't Permanently Delete Items Until the Store Has Been Backed Up.

NOTE With Exchange 5.5, you can easily recover deleted items from within the Outlook client (version 8.03 and later). However, if you configure your server not to save deleted items for a period of time, the user will not be able to recover any items. This option is set to zero days by default; it must be configured in order for deleted mail to be saved.

3. Click the Issue Warning (K) check box and enter a folder data size (in kilobytes) at which a folder contact will be notified. By default, this option is not checked. You can also set warnings at the individual folder level on the public folder's Advanced page, and that setting overrides this global setting for the server.
4. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

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The Instances Page

Use this page to mark public folders from other servers for duplication to the local server. Such instances of public folders in the local site are actually created through the process of public folder replication (see Figure 15.16).

1. Select the Instances tab of the Public Information Store properties sheet. The page shown in Figure 15.16 appears.

   The Public Folders list on the left side lists all the folders in the currently selected remote site. The list on the right, Folders on this Information Store, lists both public folders on this server and other folders already designated for replication to this server.

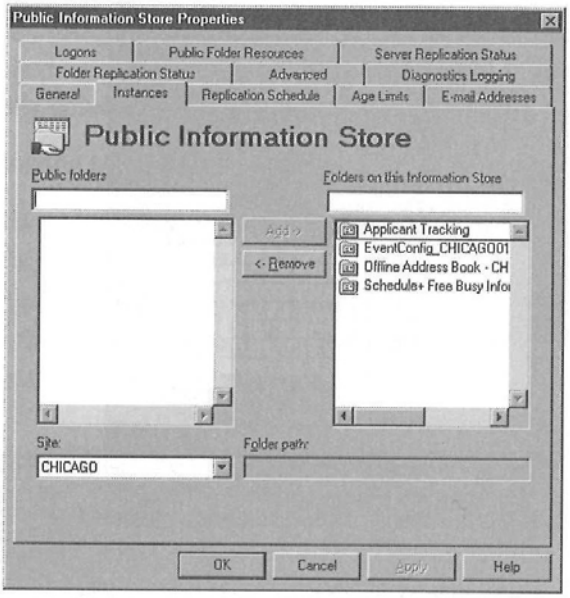


FIG. 15.16
Create public folder replicas on the local server. These public folders will be replicated from remote servers selected from this page.

2. Use the Site pull-down menu in the lower-left corner to select a site in your organization. The public folders residing on that site appear in the list on the left.
3. Select a folder from the Public Folders list and click Add to mark that folder for replication to the local Exchange server.
4. To remove a public folder's instance from the local server, select it from the list on the right, and then click Remove.

NOTE You cannot remove a local public folder from the local Exchange server if it is the only copy of the folder in the local site. ■

5. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

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The Replication Schedule Page

From this page, you can set times when public folder replication messages are actually transferred. Take into consideration the potentially high volume of data that may need to be transferred from a large and heavily used public folder.

Complete the following steps to set the Replication Schedule properties:

1. Select the Replication Schedule tab of the Public Information Store properties sheet. The dialog box in Figure 15.17 appears.

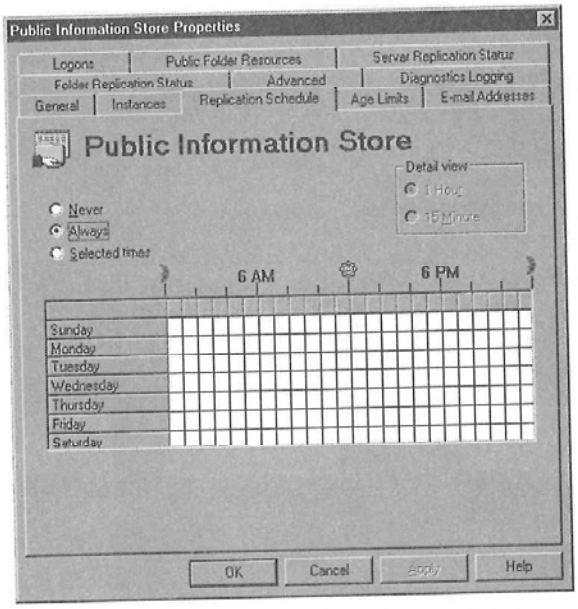


FIG. 15.17
Set public folder replication times for this server.

2. Select one of the three option buttons that determine when this server initiates public folder replication:

   Never. This effectively disables public folder replication for this server.

   Always. Folder replication messages are sent every fifteen minutes. The time delay can be changed on the Advanced page of this public information store's properties sheet. By default, Always is selected.

   Selected Times. Replication messages are transferred based upon the time grid on this page.

3. If you choose Selected times, the Detail view option buttons become available. Select either the 1 Hour or 15 Minute detail view, and the time grid scale changes accordingly.
4. Also if you choose Selected times, pick the time blocks for connection.
5. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

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NOTE Keep in mind that replication is not the same as simple duplication or copying. Replication includes the concept of synchronization, which loosely translated means that only the changes are sent to other replica "instances" around the enterprise. Sending only the changes (as opposed to sending an entire copy of the folder) not only saves time and bandwidth, it allows changes from any instance to be added to all other instances. ■

The Age Limits Page

Using the Age Limits page, you can define when information in a public folder should expire and be automatically deleted. This feature prevents public folders from becoming bogged down with megabytes upon megabytes of outdated, useless information.

First, you set up a CLASSIFIEDS folder, and then you set the age limit for posting in the folder to seven days. Based on that setting, after a message sits in a folder for seven days, it expires and is automatically deleted by the information store.

Complete the following to set age limits:

1. Select the Age Limits tab of the Public Information Store properties sheet. The page shown in Figure 15.18 appears.

   The main display window shows columns of information about all the public folders on this server (including replicas). You'll learn more about the kinds of information displayed in these columns later in this chapter.

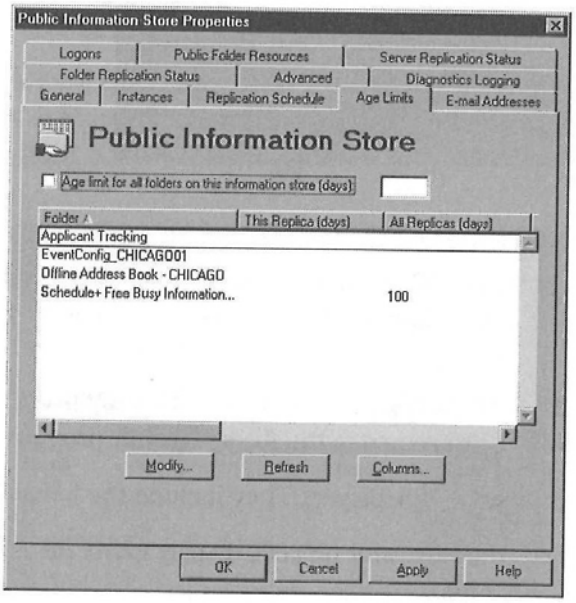


FIG. 15.18
Set the amount of time a message can exist in a public folder before it is deleted.

2. To set an overall age limit, in days, for all folders on this information store, select the Age Limit for All Folders... check box and enter a number in the text box to indicate the number of days in which messages in this server's public folders will expire.

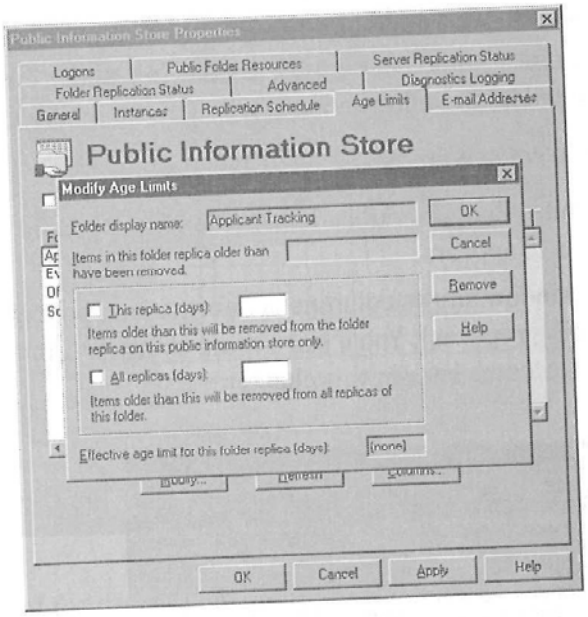
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NOTE You can override this setting for an individual public folder by changing the setting on the Advanced page of that folder's properties sheet. ■

3. Select a public folder from the list and click Modify to set individual age limits for this folder. The dialog box in Figure 15.19 appears.

   Click the This Replica (Days) check box to set an age limit for a public folder's instance on this server only. Click the All Replicas (Days) check box to set an age limit set for all instances of a public folder throughout your organization. Click the Remove button to delete the selected public folder *instance* from the information store. Click OK to set your choices.

FIG. 15.19
Set age limits on an individual folder basis.



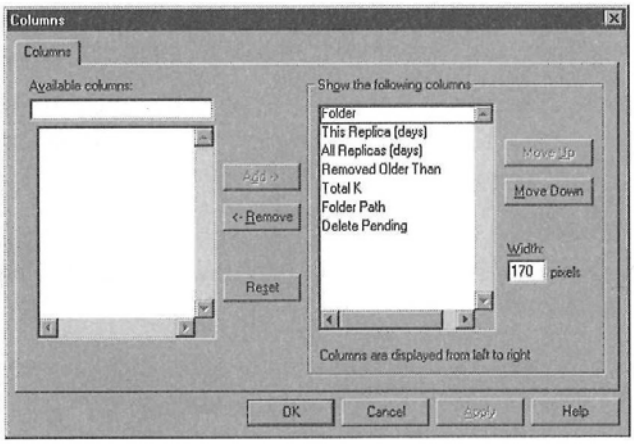
4. Click the Refresh button to update the display window with the latest information.
5. Click the Columns button to edit which columns are displayed and their widths in pixels (see Figure 15.20). The list following these steps provides more details on the available columns.
6. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

By default, all available columns are displayed. They include the following:

- *Folder.* The Exchange Administrator object's display name for the folder.
- *This Replica (Days).* Age limit set for a public folder's instance on this server only.
- *All Replicas (Days).* Age limit set for all instances of a public folder throughout your organization.
- *Removed Older Than.* Notification that messages older than the number of days displayed have been deleted.
- *Total K.* The sum of all messages in a public folder.

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FIG. 15.20
Display columns available for the Age Limits page.



- *Folder Path.* The location of the public folder in the organization hierarchy (relative to this server or full X.400 address to another server).
- *Delete Pending.* Normally "false," this column shows "true" when a folder or messages with that folder are scheduled to be deleted.

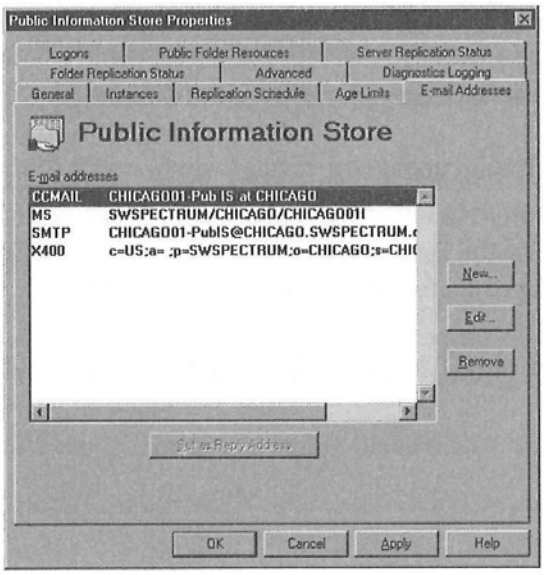
The E-Mail Addresses Page

E-mail addresses are used by the various Exchange gateways and connectors to identify specific directory objects to other messaging systems. Four default addresses are created, one each for cc:Mail, Microsoft Mail, SMTP, and X.400.

Complete the following steps to set public folder e-mail addresses:

1. Click the E-Mail Addresses tab of the Public Information Store properties sheet. The dialog box in Figure 15.21 appears, showing the four default addresses (cc:Mail, Microsoft Mail, SMTP, and X.400).

FIG. 15.21
Define e-mail addresses for this directory object.



2. Click New to add a specific e-mail address for this information store. Or, select an existing address, and then click Edit to modify it or click Remove to delete it.
3. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

The Logons Page

You use this page to monitor which users are currently connected to a public folder. To do so, complete the following steps:

1. Select the Logons tab of the Public Information Store properties sheet. The page shown in Figure 15.22 appears.

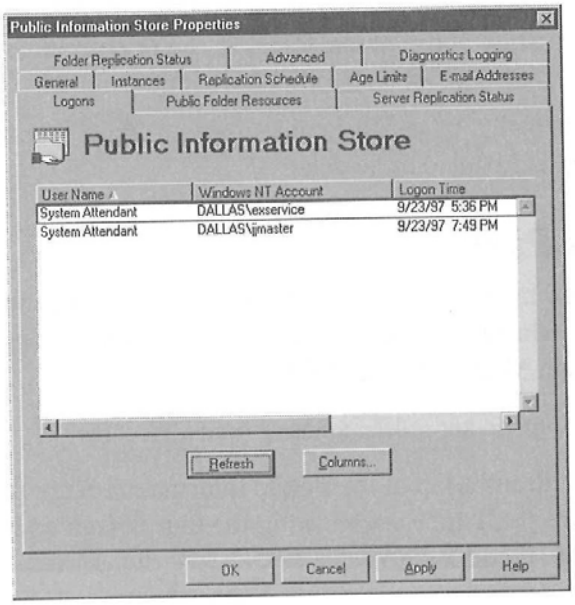


FIG. 15.22
View users currently connected to public folders on this server. The main display window shows columns of information about connected users.

NOTE The Microsoft Exchange System Attendant is always listed in this window because the System Attendant is always logged in when the Exchanger Server is running.

2. Click the Refresh button to update the display window with the latest information.
3. Click the Columns button to edit which columns are displayed and their widths in pixels (see Figure 15.23). See the list following these steps for a description of the column headings and what type of information each one can display.
4. Click Apply to set these properties and continue changing properties. If you are satisfied with all settings, click OK to return to the Administrator program.

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