

*EDMSuite OnDemand  
Getting Started with the  
Administrator Interface for  
Windows NT and Windows 95  
Version 2.2*

S544-5463-04

May 1, 1998





EDMSuite OnDemand

# Getting Started with the Administrator Interface for Windows NT and Windows 95

*Version 2.2*





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# Getting Started with the Administrator Interface for Windows NT and Windows 95

*Version 2.2*

**Fifth Edition (May 1998)**

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## About this publication

This book contains information about the administrator interface, a graphical user interface provided with IBM EDMSuite OnDemand Version 2.2 (OnDemand) to maintain the system. For example, you can use the administrator interface to define reports to OnDemand and maintain OnDemand users and groups. The administrator interface runs under Windows NT Version 4.0 or later and Windows 95.

This book is not a user's guide. It is a book that describes a typical system, including requirements about users of the system and data to be loaded on the system, and contains examples and ideas about how to use the administrator interface to implement the requirements. In it you'll find:

- An introduction to the administrator interface
- Advice about what is required to get your work done
- Pointers to detailed how-to information in the online help and other reference material

This book gives you a frame of reference. If you need more information, the book tells you where to look in the online help. If you can't find answers to your questions, the book tells you how to contact IBM.

This book is organized in roughly the order you define your first report to OnDemand: It starts with adding users and groups to the system, shows how to define a printer, and then moves into procedures for adding a storage set and defining a primary storage node. Later chapters provide detailed instructions about defining a report: adding an application group, an application, and a folder.

Before you begin, we recommend that you review "Part 2. OnDemand concepts" on page 21 to familiarize yourself with concepts and terminology used in this book. See the *Introduction and Planning Guide* if you need more information about OnDemand.

We hope you find using this book and administering OnDemand straightforward. You can let us know if you find this book helpful and tell us how well we presented the information in this book. Use the reader's comment form at the back of the book to send us your comments.

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## Who should use this publication

This book is of primary interest to people responsible for maintaining an OnDemand system. You and others in your organization can use the administrator interface to maintain users, groups, printers, storage sets, application groups, applications, and folders.

We assume that you are familiar with the Windows NT and Windows 95 operating environments and using applications that run under Windows. We assume that you know how to start application programs, use a pointing device, such as a mouse, and that you are familiar with terminology, such as window, dialog box, entry field, button, scroll bar, list, and check box.

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## How this publication is organized

“Introducing the Administrator Interface,” beginning on page 1, provides an introduction to the administrator interface, including how to start the administrator interface, log on to a server, and maintain passwords, describes the types of tasks you can perform with the administrator interface, and contains information about the OnDemand system parameters you can maintain with the administrator interface.

“OnDemand Concepts,” beginning on page 21, provides an overview of the areas in an OnDemand system: users, groups, printers, storage sets, application groups, applications, and folders. This section also explains the relationship between application groups, applications, and folders and contains information about user and data security in OnDemand.

“OnDemand in Action,” beginning on page 41, introduces you to maintaining OnDemand with the administrator interface. It provides step-by-step instructions for using the administrator interface to define users, groups, printers, storage sets, and reports to the system. We start by describing a typical OnDemand system environment, including operational requirements and other assumptions. We then use this information to define the users and groups, a report, and other items for our example system.

“Reference,” beginning on page 105, contains information about the fields, options, and dialog boxes that you use to maintain areas with the administrator interface.

“Glossary,” beginning on page 193, contains terms and definitions that you might find helpful to learn about and use OnDemand.

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## Product support

The IBM support center maintains current information about OnDemand, including the administrator interface.

Before you install OnDemand, contact the support center or your IBM software service representative to obtain the latest maintenance information about OnDemand.

If problems occur when you run any of the OnDemand programs, you can call the support center to obtain software problem and defect support. The phone number for the IBM support center is 1-800-237-5511.

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## Our use of typefaces

Throughout this book, words and phrases appear in **Bold**, *Italic*, and other fonts. The following explains our convention when using these fonts.

<b>Bold</b>	Used for paragraphs that call attention to especially relevant information about a topic or command.
<i>Italic</i>	Used to emphasize concepts and terms.
Monospace	Indicates output of commands and programs in examples. Also used for information you are instructed to type.
UPPERCASE	Indicates parameter or command names.

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## IBM EDMSuite OnDemand publications

The following publications contain information about IBM EDMSuite OnDemand Version 2.2:

*Introduction and Planning Guide*, G544-5281

*Installation and Configuration Guide for AIX*, G544-5280

*Installation and Configuration Guide for Windows NT*, G544-5526

*Installation Guide for OnDemand Clients*, G544-5527

*Administrator's Reference*, S544-5293

*Indexing Reference*, S544-5489

*Getting Started with the User Interface for OS/2*, S544-5510

*Getting Started with the User Interface for Windows 3.1*, S544-5509

*Getting Started with the User Interface for Windows NT and Windows 95*, S544-5469

*Getting Started with the Administrator Interface for Windows NT and Windows 95*, S544-5463



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## Part 1. Introducing the administrator interface

## **2** Getting Started with the Administrator Interface

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## Chapter 1. How does the administrator interface help me do my job?

Welcome to the OnDemand administrator interface, a powerful and flexible program designed to help you maintain your OnDemand system.

The administrator interface provides tools for:

- Defining reports to the system
- Adding and maintaining OnDemand users and groups
- Adding and maintaining server printers
- Maintaining storage sets and storage nodes
- Generating reports about users, groups, applications, application groups, storage sets, folders, and printers
- Adding and maintaining servers
- Setting system parameters for OnDemand servers and client programs.
- Copy items from one OnDemand server to another.

## 4 Getting Started with the Administrator Interface



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## Chapter 2. Installation instructions

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### Recommended system

The OnDemand administrator interface runs under Microsoft Windows NT Version 4.0 and Microsoft Windows 95 and requires the following hardware and software:

- Physical connection to the network, such as a Token Ring or Ethernet network adapter
- The standard TCP/IP support provided with Windows NT or Windows 95
- A minimum of 16 megabytes of memory
- An 80486 or faster processor
- A super-VGA display and adapter with a minimum resolution of 800x600
- A minimum of 18 MB of free hard disk space

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### Installing the administrator interface

Refer to the *Installation Guide for OnDemand Clients* for instructions about installing the administrator interface.

## **6** Getting Started with the Administrator Interface

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## Chapter 3. Getting started

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### Starting the administrator interface

To start the administrator interface:

1. Click Start.
2. Select Programs, then choose OnDemand32.
3. Click OnDemand32 Administrator.
4. When you start the administrator interface, OnDemand opens the administrator window that contains a menu bar, toolbar, navigator pane, list pane, and status bar. Figure 1 shows the administrator window.

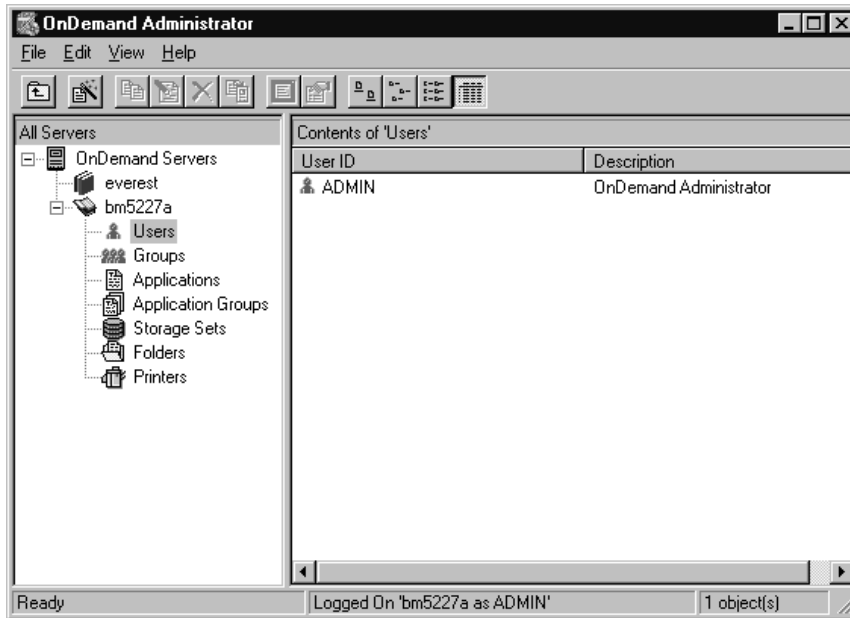


Figure 1. Administrator Window

- You can collapse and expand areas in the navigator pane (on the left) to make it easier to see. A plus sign next to an area means there are items inside.
- When you click on an area in the navigator pane, the items appear in the list pane (on the right).

- To make the panes narrower or wider, point to the vertical bar between the two panes of the window until the pointer turns into a two-headed arrow. Then click and hold the left mouse button and drag it in either direction.
- Use buttons on the toolbar to switch between the different ways to look at items: large or small icons, a list, or details.

---

## Using online help

Online help provides information to assist you with completing tasks. The administrator interface online help contains information about the options, fields, and commands on the windows, dialog boxes, and property sheets that you see when using the administrator interface.

To display the online help, press F1 any time the administrator interface is active in Windows. Help is available for dialog box commands and options. The main help topic for each dialog box usually contains information about the kinds of tasks you can perform. For example, the online help about Logical Views lets you learn how to create public and private logical views. The online help provides brief procedures rather than lengthy descriptions.

To display an index of help topics, select Search from the Help menu. You can type search words to locate related topics in the help file.

To learn about Windows help and for information about how to use Windows help, select Using Help from the Help menu.

---

## Adding a server

You can use the New Server command to add a server.

1. Select OnDemand Servers.
2. From the File menu, select New Server. OnDemand displays the Add a Server dialog box.
3. Type the name of the server in the Server field. The server name identifies the server in the navigator pane of the administrator window. You can use an alias, the actual computer or network name of the workstation, or any other identifier you choose. By default, the administrator copies what you type to the Host Name field.
4. Optionally enter the Host Name of the server. The host name can be a host name alias, fully-qualified host name, or IP address of the server. By default, the Host Name field contains the same value as the Server field.
5. Verify the Protocol. Select from TCP/IP, IPX/SPX, and Local:

- TCP/IP. Use TCP/IP (Transmission Control Protocol/Internet Protocol) as the network protocol. To use TCP/IP, the server and the client must include TCP/IP in the protocol stack.
  - IPX/SPX. Use IPX/SPX (Internetwork Packet Exchange/Sequenced Packet Exchange) as the network protocol. To use IPX/SPX, the server and the client must include an IPX/SPX-compatible network protocol in the protocol stack.
  - Local. Use the local file system manager to communicate with the server.
6. Verify the Port Number. For TCP/IP, the port number that the library server monitors for client program requests.  
The default value, 0 (zero), means that the server monitors the port number of the OnDemand TCP/IP service. If you did not register the OnDemand TCP/IP service, the server monitors port number 1445. If you did not register the OnDemand TCP/IP service and you plan to use a port number other than 1445, you must enter a valid port number.
  7. Click OK to add the server.

---

## Logging on a server

In either the navigator pane or the list pane, point to the library server and double click the left mouse button. OnDemand displays the Logon dialog box.

Enter your OnDemand userid and password in the spaces provided and click OK.

---

## Changing passwords

**Note:** Depending on how you set the Login Processing system parameters, the case of a password may be significant. “Chapter 4. System parameters” on page 11 provides details.

### Changing a password

To change a user’s password:

1. Select and expand the library server.
2. Select Users.
3. In the User ID list, point to the userid and click the right mouse button.
4. From the pop-up menu, select Update. OnDemand displays the Update a User dialog box.
5. Type the new password in the Password field. An OnDemand password can be from one to 20 characters in length.

6. Retype the new password in the Verify Password entry field. The case and the password must match exactly.
7. Click OK. OnDemand updates the database and returns to the administrator window.

### **Changing an expired password**

OnDemand provides password expiration processing so that you can set a value that represents the time in days that passwords assigned to users remain valid. Refer to “Chapter 4. System parameters” on page 11 for information about how OnDemand expires passwords.

After a password reaches the expiration value, the next time the userid is used to log on to a server, OnDemand prompts the user to enter a new password.

The user must enter the current password for the userid, a new password, and verify the new password by retyping the new password

---

## Chapter 4. System parameters

OnDemand system parameters allow you to establish the following operational settings for client programs and servers.

---

### Password Expiration

You can set a value that represents the time in days before OnDemand prompts users to change their password. The default setting is 90 days. A value of -1 (minus one) means that OnDemand does not prompt the user to change the password, that is, the password for the User ID never expires. A value of 0 (zero) means that OnDemand prompts the user to change the password every time the User ID is used to log on to a server.

---

### Minimum Password

You can set a value that OnDemand uses to verify that the password for a User ID contains the minimum number of characters. The default setting is 8 (eight). The valid range is 0 (zero) to 20 (twenty). If you set the Minimum Password to 0 (zero), OnDemand users are not required to enter a password.

OnDemand checks the number of characters a user enters when changing a password. The new password must contain the minimum number of characters. Otherwise, OnDemand issues an error message.

---

### Inactivity Time Out

You can set a value that causes the OnDemand server to terminate sessions with inactive client programs, including the administrator interface. The default setting is 60 (minutes) and means that OnDemand terminates a session after one hour of no activity. A value of 0 (zero) means that OnDemand does not terminate sessions, regardless of how long OnDemand client programs remain inactive.

The period of inactivity is measured between requests to a server. For example, when a user enters a query, OnDemand searches the database and builds the document list. This completes a request to the server. If the user does not work with the items in the document list, open another folder, or invoke another query before the inactivity timeout value elapses, OnDemand automatically terminates the session with the client.

Use caution when you set the inactivity timeout value. For example, assume that you set the Inactivity Timeout value to 10 (minutes). You log on to OnDemand to add an application group. Creating the application group takes you 15 minutes to complete. After entering all of the information about the application group, you click OK to create the application group. OnDemand issues a message that shows a time-out has occurred. You must logoff the server, and you cannot save the information you entered about the application group.

---

## System Logging

You can identify messages that OnDemand records in the system logging facility. OnDemand provides a system logging facility to help you track activity and monitor the system. OnDemand records messages generated by various programs. OnDemand can record a message when the following events occur:

- A user logs on to the system.
- A user logs off the system.
- A user logon fails.
- Application group data is queried, retrieved, loaded, updated, deleted, or maintained.

---

## User Exit Logging

OnDemand provides an exit at each of the four system logging event points. These exits allows you to filter the messages and take action when a particular event occurs or determine what information appears in the system log. For example, you can provide a user exit program that sends a message to a security administrator when a log on attempt fails.

If you plan to migrate index data to archive media, we recommend that you write application group messages to the system log user exit. You should configure a system log user exit program to notify an administrator when a query for migrated data occurs. Before a query for migrated data can be completed, an administrator must import a copy of the required table or tables into the database.

The Installation Guide provides details about the system log user exit.

---

## Login Processing

The login processing system parameters allow you to specify whether userids and passwords are case sensitive.



By default, userids and passwords are case insensitive. When you add a user, OnDemand converts lowercase letters in the userid to uppercase. A person can type letters in a userid in uppercase, lowercase, or mixed case letters. For example, if you add the userid LaGuarde, a person can enter LAGUARDE, laguarde, or LaGuarde to log on to the server.

If you select the UserID Case Sensitive check box, a person must type the userid exactly as it was entered when the user was added. For example, if you add the userid LaGuarde, a person must enter LaGuarde to log on to the server.

If you select the Password Case Sensitive check box, a person must type the password exactly as it was entered when the user was added. For example, if you set the password to Spring2Far, a person must enter Spring2Far to log on to the system.

We strongly encourage you to decide whether you want userids and passwords to be case sensitive when you install the system, change the defaults if necessary, and do not change the settings again. Otherwise:

- If userids are initially case insensitive and you later select the UserID Case Sensitive check box, userids added before you changed the setting must be entered in uppercase. The same is true for passwords.
- If userids are initially case sensitive and you later clear the UserID Case Sensitive check box, userids containing mixed or lowercase letters that were added before you changed the setting will no longer be valid. The same is true for passwords.

If users log on to OnDemand with the CICS/ESA client program, userids and passwords should be case insensitive.

---

## Setting system parameters

To set the system parameters for an OnDemand server:

1. Log on to the library server.
2. Point to the library server and click the right mouse button.
3. From the pop-up menu, select System Parameters. OnDemand displays the System Parameters dialog box. Figure 2 on page 14 shows an example of the System Parameters dialog box.

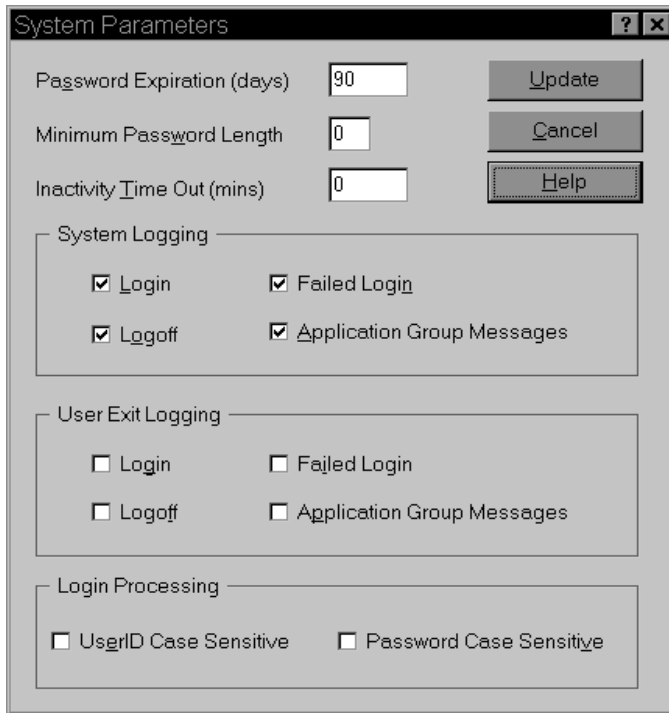


Figure 2. System Parameters Dialog Box

4. To change the value in the Password Expiration, Minimum Password Length, or Inactivity Time Out field, type over the value in the entry field.
5. To choose a System Logging, User Exit Logging, or Login Processing option, select the check box next to the item. OnDemand places a checkmark in the check box.
6. To clear a System Logging, User Exit Logging, or Login Processing option, select the check box next to the item. OnDemand removes the checkmark from the check box.
7. When you have finished making changes to the system parameters, click Update. OnDemand stores the changes in the database and returns to the administrator window.  
Click Cancel to close the System Parameters dialog box without saving your changes.

---

## Chapter 5. Administrator interface start up parameters

OnDemand provides parameters that you can specify as properties used when you start the administrator interface program under Windows. These parameters can be used, for example, to automate the logon process and to select which areas appear in the navigator pane. Table 1 lists the start up parameters for the administrator interface.

Table 1. Administrator Interface Start Up Parameters

Parameter	Purpose	Example
<i>/I location</i>	Identifies the drive and full path name of the national language environment program file directory.	<i>/I C:\ARS32\LOCALE\ENU</i>
<i>/B</i>	Include Applications in the navigator pane.	<i>/B</i>
<i>/C</i>	Include Data Distribution in the navigator pane. This flag is valid only if you install the Production Data Distribution feature on the library server.	<i>/C</i>
<i>/D</i>	Include Folders in the navigator pane.	<i>/D</i>
<i>/D 2</i>	Include Folders in the navigator pane, but display only the Permissions and Field Information pages.	<i>/D 2</i>
<i>/E</i>	Include Storage Sets in the navigator pane.	<i>/E</i>
<i>/I</i>	Include Users in the navigator pane.	<i>/I</i>
<i>/O</i>	Include Groups in the navigator pane.	<i>/O</i>
<i>/P password</i>	The password for the OnDemand user identified with the <i>/U</i> flag. Use with the <i>/S</i> and <i>/U</i> flags to log on to a specific server, without displaying the Logon dialog box. If the logon is not successful, OnDemand allows the user to log on to the system by displaying the Logon dialog box.	
<i>/Q</i>	Include Application Groups in the navigator pane.	<i>/Q</i>

Table 1. Administrator Interface Start Up Parameters (continued)

Parameter	Purpose	Example
<b>/R</b>	Include Printers in the navigator pane.	/R
<b>/S</b> <i>server</i>	Identifies the logon server. Use with the /U and /P flags to log on to a specific server, without displaying the Logon dialog box. If the logon is not successful, OnDemand allows the user to log on to the system by displaying the Logon dialog box.	/S broncos
<b>/T</b>	Determines the name that appears on the title bar of the administrator window. The default name is OnDemand Administrator.	/T Customer Service
<b>/U</b> <i>userid</i>	Identifies the OnDemand user. Use with the /S and /P flags to log on to a specific server, without displaying the Logon dialog box. If the logon is not successful, OnDemand allows the user to log on to the system by displaying the Logon dialog box.	/U admin

---

## Changing start up parameters

To change start up parameters:

1. Click Start.
2. From the pop-up menu, select Explore.
3. Under Start Menu, expand Programs.
4. Select OnDemand32.
5. In the list pane, point to OnDemand32 Administrator and click the right mouse button.
6. From the pop-up menu, select Properties.
7. Click the Shortcut tab.
8. In the Target field, enter the startup parameters.  
 Make sure you enter any startup parameters after the string:  
 C:\ARS32\ARSADM32.EXE
9. Click OK.

The next time that you start the administrator interface, Windows uses the start up parameters and values that you specified.

---

## Examples

The following program properties could be used to set up the administrator interface program so that when a person starts the program, the name Customer Service is displayed in the title bar of the administrator window.

```
C:\ARS\ARSADM32.EXE /T "Customer Service"
```

The following program properties could be used to set up the administrator interface program so that when a person starts the program, OnDemand displays only users and folders in the navigator pane. When the user selects folders, OnDemand displays only the Permissions and Field Information pages.

```
C:\ARS\ARSADM32.EXE /I /D 2
```

The following program properties could be used to set up the administrator interface program so that when a person starts the program, OnDemand attempts to log on to the specified server, without displaying the Logon dialog box. If the logon attempt is not successful, OnDemand allows the user to log on to the system by displaying the Logon dialog box.

```
C:\ARS\ARSADM32.EXE /S broncos /U admin /P
```



---

## Chapter 6. Adding items to a server

This section explains how to add items to a server. You can use commands or a drag-and-drop operation to add items to a server.

---

### New command

After logging on to a server, select the area, for example, Users. From the File menu, select the New command. OnDemand displays the Add dialog box.

---

### Copy command

After logging on to a server, select the area. In the list pane, point to the item that you want to copy and click the right mouse button. From the pop-up menu, select Copy. OnDemand displays the Add dialog box. The fields in the Add dialog box contain information copied from the item you selected. Before you can add the item, you must change the item name. Depending on the item you want to add, you may need to change other fields.

---

### Export command

The Export command is like the Copy command, except you must identify the server where OnDemand stores the new item. The server (the destination server) must be different than the server (the source server) where the original item exists. The Export command provides the capability to copy items from one OnDemand server to another.

After logging on to the server that contains the item you want to copy, select the area. In the list pane, point to the item that you want to export and click the right mouse button. From the pop-up menu, select Export. OnDemand displays the Export dialog box. Verify the destination server. Then click Export to copy the item to the server.

**Note:** If the item exists on the destination server, the export fails.

---

## Drag and drop operation

You can copy and export items using a drag-and-drop operation. For example, to export items from one server to another, select one or more items from the list pane and, while holding the left mouse button down, point to the destination server. Then release the mouse button. If you are logged on to the destination server, OnDemand displays the Export dialog box. If you are not logged on to the destination server, OnDemand displays the Logon dialog box. After verifying options in the Export dialog box, click Export to copy the items to the server.

**Note:** If the item exists on the destination server, the export fails.

You can also use a drag-and-drop operation to copy an item. For example, to copy a user, select the userid from the User ID list and, while holding the left mouse button down, point to the server. Then release the mouse button. OnDemand displays the Add dialog box.



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## Part 2. OnDemand concepts



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## Chapter 7. Introduction

You can use the administrator interface to maintain OnDemand users, groups, printers, storage sets and storage nodes, application groups, applications, and folders.

---

### Users

When you define an OnDemand user, you create a userid that a person uses to log on to an OnDemand server. You can optionally add the userid to folders and application groups, which is one way to let the user open folders and access data.

Each person logs on to OnDemand with an OnDemand userid. OnDemand authenticates the userid and determines the usage and administrative authority available to that person, based on the log on userid.

An OnDemand userid does not necessarily have to identify an individual by name. However, for accounting purposes, you probably want to assign an OnDemand userid to each person that will use OnDemand. When you initialize the system, OnDemand automatically creates the ADMIN userid. The ADMIN userid has system administrator authority. A system administrator can perform the basic user functions, such as logging on the system and opening folders, and administrative functions, such as defining users and groups to OnDemand, and creating, updating, and deleting application groups, applications, folders, storage sets, and printers.

**Note:** The ADMIN userid does not have an initial password assigned. Because the ADMIN userid has system authority, we recommend that you assign a password to the ADMIN userid immediately after installation.

When naming OnDemand users, the name that you specify:

- Can contain one to 20 characters (bytes).
- Cannot include the ' (apostrophe), \* (asterisk), % (percent), + (plus), \_ (underscore), [ (left bracket), ] (right bracket), " (double quote), or blank character.
- Must be unique in OnDemand.

You can enter a user name in mixed case. By default, OnDemand ignores the case (LaGuarde is the same as laguarde). OnDemand converts lowercase letters in a user name to uppercase (LaGuarde is stored as LAGUARDE).

However, depending on how you set the Login Processing system parameters, userid processing may be different (the case may be significant). Refer to “Chapter 4. System parameters” on page 11 for more information.

## User types

When you add a user to OnDemand you can choose one of four user types:

**User** Users can log on to OnDemand, open folders they are authorized to access, and query and retrieve data from application groups they are authorized to access. Users can be given authority to create application groups, applications, and folders. Users can update their own userid.

### User Administrator

A user administrator can perform the basic user functions and can add, update, and delete users. A user administrator cannot perform application group/folder or system administrator functions. A user administrator cannot set or change the user type to application group/folder or system administrator. A user administrator cannot delete an application group/folder administrator or a system administrator.

### Application Group/Folder Administrator

An application group/folder administrator can perform the basic user functions and can add, update, and delete application groups, applications, and folders. An application group/folder administrator cannot perform user administrator or system administrator functions.

### System Administrator

A system administrator can perform the basic user functions and can add application groups, applications, folders, printers, storage sets, users, and groups. A system administrator can update and delete any user, group, application group, application, folder, storage set, or printer defined to OnDemand.

The logon user must have system administrator authority to change the user type to application group/folder or system administrator. If the logon user does not have permission to change the user type, the selections appear shaded (unavailable for selection).

Only a system administrator, an application group/folder administrator, or a user given the add document permission can store data in an application group.

A user must have the delete document permission to unload data from an application group.

---

## Groups

OnDemand groups are a means to organize users of the system by function, authorization, or any other purpose you might require. You do not have to assign a user to a group, but doing so can simplify administration of users with similar requirements and capabilities.

When you define a group, you can add users to the group and set folder and application group permissions that are common to all of the users that belong to the group. The permissions determine the types of actions users assigned to the group can perform.

When naming groups, the name that you specify:

- Can contain one to 20 characters (bytes).
- Cannot include the ' (apostrophe), \* (asterisk), % (percent), + (plus), \_ (underscore), [ (left bracket), ] (right bracket), " (double quote), or blank character.
- Can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).

Group names must be unique in OnDemand.

You can assign a group owner. The group owner can add users to and remove users from the group. To maintain a group's application group and folder permissions, the group owner must have administrator authority for the application groups and folders or be an application group/folder administrator or a system administrator. If you do not assign a group owner, only a system administrator user can maintain the group.

---

## Server printers

An OnDemand server printer is an interface between the user and a server print device. OnDemand supports two types of server print devices: a FAX machine and a physical printer. A server print device can be physically connected to the workstation where the library server is running or attached to another workstation in the network. Server print devices are managed by Print Services Facility (PSF).

A server printer names a queue in the AIX operating system. For AIX servers, the queue must be defined on the library server and connected to a PSF print queue. For Windows NT servers, in addition to identifying the AIX queue name, you must also identify the host name or IP address of the AIX server where PSF is running. The *Installation and Configuration Guide* describes how to configure OnDemand server printing.

PSF is an intelligent printer driver that provides AFP capabilities for OnDemand servers. These capabilities mean that you can use electronic forms, images, graphics, and typographical fonts in the documents that you print. PSF accepts input data streams, such as AFP and System/370 line data, prepares the data for the destination print device, and manages print jobs that are queued for printing, in process, or on the output device.

When a user selects an item and chooses the server print command, OnDemand retrieves a copy of the item and places it on the queue (or printer) identified by the server printer. The data stream can include application print options. PSF processes the item and the print options, sending the data to the appropriate physical device. While PSF makes no distinction between print and FAX devices, OnDemand manages these devices differently. When the user chooses a server printer that identifies a FAX device, OnDemand generates a FAX cover page and places the cover page and the item on the appropriate queue (or printer).

---

## Storage sets and storage nodes

A storage set is a named collection of storage nodes that support application groups with similar storage management requirements, such as the retention period of the files stored in the application group and the type of media on which files are stored.

You typically define one or two storage sets for an OnDemand system, based on the storage requirements of the reports that you plan to store in OnDemand. For example, you might define one storage set to maintain reports for a period of ten years and another storage set to maintain reports for a period of 180 days.

A storage set can contain one or more primary and secondary storage nodes. A primary storage node is where OnDemand manages report data and resources stored in an application group. A secondary storage node is where OnDemand can maintain a copy of the files stored in a primary storage node. A storage node identifies an OnDemand object server. OnDemand caches data on the object server where the primary storage node resides.

**Note:** If you use ADSM to manage data on archive media and you need to maintain two copies of reports stored on archive media, we recommend that you implement a copy storage pool, rather than defining a secondary storage node. Refer to the *Installation and Configuration Guide* for details about implementing a copy storage pool.

If you use ADSM to manage data on archive media, each storage node that writes files to archive media must be registered as a node in an ADSM

domain. ADSM uses the domain definitions to determine the device to store data and how long to maintain the data.

When you define an application group, you assign the application group to a storage set. The storage set must support the storage requirements of the application group. If you need to maintain files on archive media, the storage set must contain a storage node that is registered in ADSM. In addition, the retention period of the files in ADSM must be the same as the life of the data in OnDemand. If you need to maintain a backup copy of files stored in the application group, we recommend that you implement a copy storage pool in ADSM.

---

## Application groups

An application group represents the data that you store in OnDemand and query, view, print, and FAX using OnDemand client programs. For example, the data can be reports generated by an MVS application program, index data generated by ACIF, and annotations created by users. Application group data can be managed by OnDemand or it can be managed independently of OnDemand.

When you define an application group, you specify properties of the application group, such as the organization of the database and the storage characteristics for the files stored in the application group and define the names and set the properties of the application group database fields.

OnDemand extracts index data from the reports that you load into an application group and places the data in the fields that you define. OnDemand uses the index values to identify the reports (or groups of pages) that meet the search criteria entered by a user.

When you define an application group, you can also select the types of application group messages that OnDemand records in the system logging facility.

When you define an application group, you establish permissions to access and maintain the application group and application group data. You can identify the groups and users that can access data stored in the application group with OnDemand client programs. You can specify the types of functions that users can perform, such as viewing, printing, and annotating reports. You can assign administrator authority to a user or a group. Administrator authority allows a user to update the application group, for example, to authorize other users to access data stored in the application group.

OnDemand organizes information about an application group into sections: General, Message Logging, Storage Management, Permissions, Field Definition, and Field Information. Each section contains options, fields for you to enter information about the application group, and command buttons.

---

## Applications

You typically define an application for each different type of report that you plan to store in OnDemand.

When you define an application, you assign the application to an application group and specify the characteristics of the report. OnDemand data indexing, loading, and viewing programs use the information that you provide to process the report. You can enter the parameters that the OnDemand indexing program uses to locate and extract index data from the report. You can create logical views for the application. Logical views represent different ways to display pages of the report. You can set up printing options, such as defining a default printer for the application.

OnDemand organizes information about an application into sections: General, View Information, Indexer Information, Load Information, Logical View Fields, Logical Views, and Print Options. Each section contains options, fields for you to enter information about the application, and command buttons.

---

## Folders

A folder provides users the means to access reports stored in OnDemand. Users open a folder, construct queries, and view and print reports stored in the application groups referenced by the folder.

When you define a folder, you specify the properties of the folder, such as the name and description of the folder, create the search and display fields that appear when users open the folder, and map the folder fields to application group database fields.

You can also specify the groups and users that can open the folder with OnDemand client programs and other folder permissions. For example, you can authorize a user to be the folder administrator. The folder administrator can authorize other users to open the folder and make changes to the folder fields.



OnDemand organizes information about a folder into sections: General, Permissions, Field Definition, Field Information, and Field Mapping. Each section contains options, fields for you to enter information about the folder, and command buttons.



---

## Chapter 8. About application groups, applications, and folders

Before you can store a report into OnDemand, you must create an application group and an application. Before users can search for and retrieve data, you must create a folder.

- Users open a folder to search for reports that you load into OnDemand. You define one or more search fields for the folder. A folder search field is mapped to an application group database field.
- Each database field that you define represents a category of information in the report, such as a customer name, invoice number, or balance. When you add an application group, OnDemand creates a database table. The database fields that you define are columns in the table.
- You define an application for each report that you plan to store in OnDemand. When you add an application to the system, you define information that the OnDemand viewing, indexing, and loading programs use. When you define indexing information, you identify the name, location, and length of each category of index information that you want to extract from the report. When you define loading information, you map index fields in the report to application group database fields.
- When you load a report into the system, OnDemand stores the index values extracted from the report into their corresponding application group database fields.
- OnDemand uses the index values to identify the reports (or group of pages) that meet the search criteria entered into folder search fields by the user.

When you want to define a report to OnDemand, your first task is to determine the application group where OnDemand stores the index data extracted from the report and the report data and resources. The application group determines the structure of the database. When you define an application group, you specify how you want OnDemand to structure and manage the index data and define database fields. In addition, an application group is associated with a storage management class. For example, you might assign an application group to a storage management class that maintains report data in cache storage for 60 days and on archive media for five years. OnDemand maintains all of the data stored in the application group the same way, for the same length of time.

- You can store the report in an existing application group, provided the database organization of the application group supports the query requirements of the users of the report. You must index the report using the application group database fields. You cannot add or remove fields from an

application group. The storage management properties of the application group must support the length of time that you want OnDemand to maintain the report on the system and how and where you want OnDemand to store and maintain the report.

You can verify information about an existing application group with the Properties command. The General page shows the database organization for the application group. The Storage Management page shows the data caching and migration information. The Field Definition page shows the application group database fields.

- If there are no application groups defined to OnDemand or there are no application groups that support the indexing and storage management requirements of the report, you must add an application group to the system.

After you add an application group, you must define an application for the report. Typically you create an OnDemand application for each different type of report that you plan to store in OnDemand. When you create an application, you select the name of the application group where OnDemand stores the report data, specify information that OnDemand programs use to view and print pages of the report, and specify instructions for the data indexing and loading programs.

The last step in the process of adding a report to OnDemand is to create a folder. Users open the folder to search for, display, and print reports. When you define a folder, you select the application group that contains the data you want users to access when they open the folder. By creating folders that reference specific application groups, you determine the reports available to users when they open a folder.

When you define a folder, you define search and display fields. You specify characteristics of the folder fields, such as default search operators and whether OnDemand displays default search values for the fields when a user opens the folder. You also map the folder fields to application group database fields.

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## Chapter 9. OnDemand permissions

Permissions are the means by which OnDemand determines who can open folders and access data stored in application groups. OnDemand also uses permissions to determine who can maintain folders and application groups with the administrator interface.

By default, only the person that adds the folder, an application group/folder administrator, or a system administrator can open and maintain the folder. By default, only the person that adds the application group, an application group/folder administrator, or a system administrator can access data stored in the application group or maintain the application group.

OnDemand provides several ways to set permissions. You can set permissions when you add or update a folder or application group. When you add or update a user or group, you can add, remove, or update the user's or group's permissions.

As both a convenience and security measure, you can assign a user to a group. OnDemand groups allow you to organize users by function, authorization, or any other means you might require. When you assign a user to a group, the user obtains the permissions set for the group. For example, suppose you create a group and authorize the group to open the Student Information folder. Any user that you assign to the group automatically obtains permission to open the Student Information folder. If you assign a user to more than one group, the user normally obtains the permissions of all of the groups. However, there are exceptions. Refer to "Setting permissions" on page 35 for details.

You can set permissions at the folder level and the application group level. OnDemand uses these permissions when users and groups do not have specific permissions for the folder or application group. If you set permissions for a specific group, the group permissions take precedence over the permissions set at the folder level or the application group level. If you set permissions for a specific user, the user permissions take precedence, regardless of any group that the user may belong to or the permissions set at the folder level or the application group level.

---

## Folder permissions

You can set folder permissions at the folder, group, and user levels. Permissions at the folder level provide every user and group defined to the library server the permissions that you set. Permissions at the group level provide the users that you add to the group the permissions that you set. Permissions at the user level provide the user with the permissions that you set. By default, only the person that adds the folder, an application group/folder administrator, or a system administrator can open the folder or maintain the folder.

You can set four types of folder permissions:

### **Access**

Users can open the folder with OnDemand client programs. To search for and retrieve data from the application groups referenced by the folder, the user must have access permission to the application groups.

**Fields** Users can open the folder with OnDemand client programs and can modify the folder field information with the administrator interface.

### **Named Queries**

A named query is a set of search criteria, saved by name, that can be selected and restored into folder search fields. OnDemand supports two types of named queries: public and private. A public named query is available to any user that can access the folder. A private named query is available to the user that created the named query. A system administrator or application group/folder administrator can also access private named queries. A user can be given authority to view, create, modify, and delete named queries.

### **Administrator**

In addition to opening the folder with OnDemand client programs, a folder administrator can maintain the folder with the administrator interface. A folder administrator can change folder permissions, add and remove users and groups from the folder, and make changes to the folder field information.

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## Application group permissions

You can set application group permissions at the application group, group, and user levels. Permissions at the application group level provide every user and group defined to the library server the permissions that you set. Permissions at the group level provide users that you add to the group the permissions that you set. Permissions at the user level provide the user the permissions that you set. By default, only the person that adds the application

group, an application group/folder administrator, or a system administrator can access data stored in the application group or maintain the application group.

You can set six types of application group permissions:

**Access**

Users can search for and retrieve data stored in the application group using OnDemand client programs.

**Document**

Determines the types of document functions users can perform. The default document functions are view, print, FAX, and copy.

**Annotation**

Determines the types of annotation functions users can perform. The default annotation functions are view and add.

**Logical Views**

Users can define private logical views with OnDemand client programs.

**Administrator**

In addition to accessing application group data with OnDemand client programs, an application group administrator can maintain the application group with the administrator interface. An application group administrator can change application group permissions, add and remove users and groups from the application group, change message logging options, update the storage management settings for the application group, and make changes to the database field information.

**Query Restriction**

Limits access to application group data. You typically set up a query restriction to limit the data that a specific user or group of users can access.

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## Setting permissions

You typically organize users into groups, add groups to folders and application groups, and assign permissions at the group level to ease the administration of OnDemand. Plan your groups before you begin creating them. Once you start using the system, it may be difficult to change your group organization.

When you add a user to a group, the user automatically obtains the group's permissions. When you add a user to more than one group, the user normally obtains the permissions of all of the groups. For example, using the group

settings listed in Table 2, a user that belongs to both groups can open the Student Bills and Student Transcripts folders.

Table 2. Group Permissions

Group	GID	Folders	Permission
Admissions	80100	Student Transcripts	Access
Accounting	80101	Student Bills	Access

In most situations, you probably add a group to a folder to provide a group of users access to the folder. However, there may be situations when you need to deny a group of users access to a folder. When you use groups to deny access to a folder, you must understand how OnDemand determines folder permissions for a group (and users assigned to the group). For example, consider the group settings listed in Table 3.

Table 3. Group Permissions

Group	GID	Folders	Permission
Admissions	80100	Student Bills	None
Admissions	80100	Student Transcripts	Access
Accounting	80101	Student Bills	Access
Accounting	80101	Student Transcripts	Access

A user that belongs to both groups can not open the Student Bills folder.

When a user belongs to more than one group, OnDemand uses the group identifier (GID) to determine the user's permissions. When two (or more) groups provide permissions for the same folder, the user obtains the permissions of the group with the lowest GID. In the example depicted in Table 3, both groups have been added to the Student Bills folder. Since the Admissions group has a lower GID than the Accounting group, OnDemand uses the Admissions group's permissions to determine the permissions of a user assigned to both groups. Consequently, users assigned to both groups cannot access the Student Bills folder.

You're probably asking yourself, "why would I assign a user to more than one group" or "why would I create a group with no access to a folder?" Perhaps some examples will help answer these questions (and clarify the OnDemand permission hierarchy). As you review the examples, please remember the following rules:

- By default, the person that created the folder, a system administrator, and an application group/folder administrator can access the folder.
- The \*FOLDER entry can be used to establish permissions for all users.



- You can override \*FOLDER permissions by establishing group-level or user-level permissions.
  - All users assigned to a group that you add to the folder obtain the permissions that you set for the group.
  - A user assigned to two (or more) groups that have been added to the same folder obtains the permissions of the group with the lowest GID.
  - Permissions that you set at the user level override all other permissions (\*FOLDER and any groups that the user belongs to and are added to the folder).

## Examples

The examples that follow show how to add groups to folders and set folder permissions. The same considerations hold true for adding groups to application groups and setting application group permissions.

### Providing a group of users access to a folder

Let's say that you want to provide a single group of users access to a folder. Complete the following steps:

1. With \*FOLDER selected, clear all of the permissions check boxes (this is the default).
2. Add the group to the folder.
3. Select the Access check box.

Users assigned to the group automatically obtain permission to open the folder.

### Denying a group of users access to a folder

Let's say that you want to prohibit a single group of users from accessing a folder, while allowing all other users defined to the library server to open the folder. Complete the following steps:

1. With \*FOLDER selected, select the Access check box. This permits all users to open the folder.
2. Add the group to the folder.
3. Clear all the permissions check boxes.

Users assigned to the group cannot open the folder.

### Providing one group of users access and denying another group of users access to the same folder

Let's say that you want to allow a group of users to access a folder. However, you need to prohibit certain users in the group from accessing the folder. You

could exclude the users from the group that can access the folder. However, there may be other folders that you want the users to access as part of the group. To solve this, create two groups, one without access to the folder and the other with access to the folder, and assign the users to the respective groups. For example:

1. Create the “no access” group. This group must have a lower GID than the “access” group. Add users to the group.
2. Create the “access” group. Add users to the group.
3. With \*FOLDER selected, clear all of the permissions check boxes (this is the default).
4. Add the “access” group to the folder.
5. Select the Access check box.
6. Add the “no access” group to the folder.
7. Clear all of the permissions check boxes.

If you later need to deny other users access to the folder, simply add the users to the “no access” group. You can also move users from one group to the other.

### **Denying one user in a group access to a folder**

Let's say that you want to prohibit one user in a group from accessing a folder. After adding the group to the folder and setting the access permission, all users assigned to the group can open the folder. To override the group permissions, we can add an individual user to the folder and set permissions at the user level. Complete the following steps.

1. With \*FOLDER selected, clear all of the permissions check boxes (this is the default).
2. Add the group to the folder.
3. Select the Access check box.
4. Add the user to the folder.
5. Clear all the permissions check boxes.

Even though the user belongs to the group, the user cannot open the folder.

### **Providing one user in a group administrator authority**

Let's say that you want to provide one user in a group the ability to administer the folder. Complete the following steps.

1. With \*FOLDER selected, clear all of the permissions check boxes (this is the default).
2. Add the group to the folder.
3. Select the Access check box.

4. Add the user to the folder.
5. Select the Administrator check box.

Only the user that you added can administer the folder, the other users in the group can open the folder.

### **Setting permissions at the application group or folder level**

Permissions that you set at the application group or folder level apply to every user or group not provided specific permissions.

For example, you set the access permission for an application group. Every user and group not provided specific permissions can access the data stored in the application group. You set the access permission for a folder. Every user and group not provided specific permissions can open the folder. You add a user, without setting specific application group or folder permissions. The user can automatically open the folder and access the data stored in the application group.

While application group- and folder-level permissions provide flexibility to maintain your system, you must make sure that using these permissions does not circumvent your security strategy. Rather than setting permissions at the application group or folder level, you may want to use groups as a means to implement your security strategy. For example, you can clear all of the permissions at the folder level (the default) and add groups to the folder, setting the appropriate permissions for each group. When you add a user, assign the user to a group. The user obtains the permissions of the group. If the group does not have access to a particular application group or folder, neither does the user. With this strategy, until you assign the user to a group, or provide the user specific permissions, the user cannot access the folder.



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## Part 3. OnDemand in action



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## Chapter 10. Overview

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### About the examples

The examples that follow demonstrate how to use the administrator interface to:

- Add users and groups to the system. Users on our system obtain permission to open folders and access application group data from a group.
- Define a server printer that can be used as the default printer for an application.
- Define a storage set that contains a primary storage node. The primary storage node uses ADSM to maintain data stored in the storage set. OnDemand caches data on the object server where the primary storage node resides.
- Add a report to the system. To add a report, we'll create an application group, an application, and a folder.

---

### System configuration

We developed our examples using a typical system configuration, as depicted in Figure 3 on page 44.

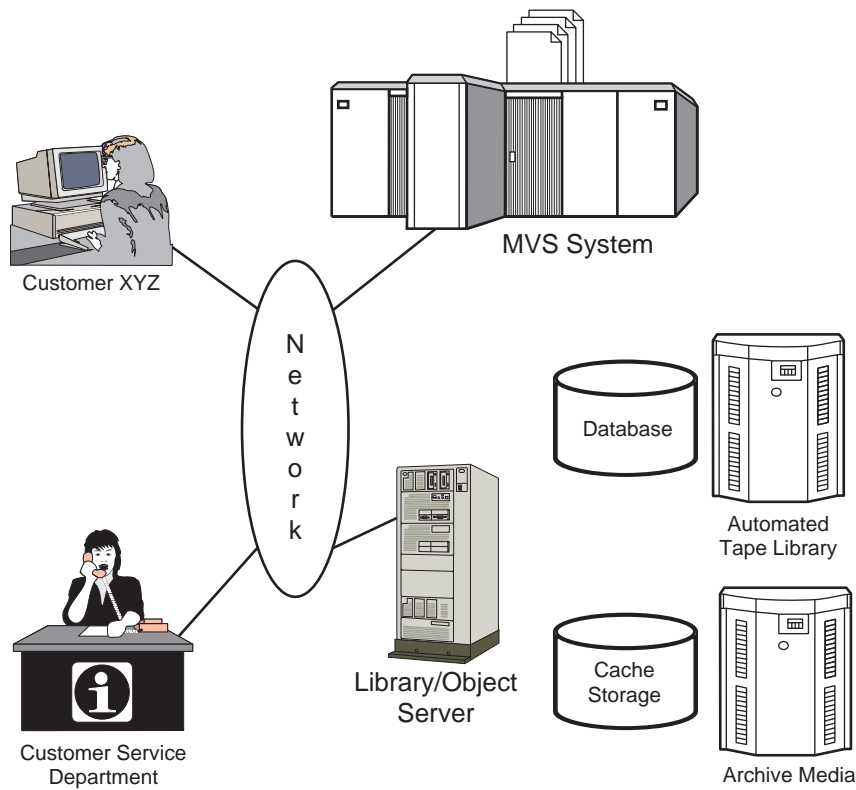


Figure 3. System Configuration

Even though we're allowing customers to access our system, for purposes of demonstrating how the system works and how to use the administrator interface to implement our requirements, these users could easily represent another department within our company.

We're making the following assumptions about our system:

- Two groups of users: the customer service department and users at Customer XYZ.
- Add the telephone bill report to the system. The telephone report is generated by an application program running on an MVS system. We'll use the MVS Download feature to transmit the report data to the OnDemand server. We'll index the report on the server.
- OnDemand servers. The library server and the object server reside on the same workstation.
- Database. We use SMS table spaces and create incremental backups each time we load a report into the system. The database resides on RAID



storage devices. We use ADSM to manage the database log files and backup image files. ADSM maintains the files in an automated tape library.

- Cache storage. When we load a report into the system, OnDemand stores a copy in cache storage and maintains the report for 60 days. Reports are cached on RAID storage devices attached to the object server.
- Archive media. When we load a report into the system, OnDemand stores a copy on archive media. ADSM maintains the report on optical storage for five years.
- System parameters. Because we require users to log on with a password, we set the minimum password length to four characters. We accept the defaults for the other system parameters.



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# Chapter 11. Adding users

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## The basics

In general, here is how you work in the administrator interface to add a user:

1. Identify the library server and select Users.
2. Pick one of two ways to add a user.
3. Define the properties of the user by completing fields in the Add a User dialog box. More details are provided in “Chapter 16. Add a User dialog box” on page 107.
4. Optionally add the user to groups. More details are provided in “Adding a user to a group” on page 110.
5. Optionally add the user to application groups and set application group permissions. More details are provided in “Application Group Permissions page” on page 110.
6. Optionally add the group to folders and set folder permissions. More details are provided in “Folder Permissions page” on page 113.
7. When finished, add the user by clicking OK in the Add a User dialog box.

**Note:** To add a user, the logon user must be a user administrator or a system administrator.

### Identify the server

1. On the left side of the administrator window, click the name of the library server where you want to add the user.
2. Expand the areas of the library server. Double click the server name or click the + (plus) to the left of the server name.
3. Select Users.

### Two ways to add a user

This section explains how to add a user by using the New User command. You can also add a user by copying an existing user definition.

#### New User command

From the File menu, select New User. The administrator displays the Add a User dialog box.

## Copy command

You can use the copy command to add a user. In the User ID list, point to the user that you want to copy and click the right mouse button. Select Copy from the pop-up menu. The administrator displays the Add a User dialog box. The fields in the dialog box contain information copied from the user you selected. At a minimum, you need to change the User ID (userids must be unique to the library server).

## Adding the user

In the Add a User dialog box, click OK. The administrator adds the user to the database and returns to the administrator window.

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## Examples

First, let's review the requirements of the users that need to access the telephone bill reports.

- We need to define a set of userids for the customer service department. We'll identify one user as a user administrator. The user administrator can add other users and reset passwords.
- We need to define a userid for Customer XYZ.

On our system, users obtain permissions from groups. That means we don't add users to application groups and folders. When we define our groups, we'll add users to the groups.

**Note:** We're not going to document how to add all of the users to our system. We'll add two users. You can repeat the steps to add the others.

## Adding the customer service users

Let's use the New User command to add a user.

1. First, point to Users and click the right mouse button. From the pop-up menu, select New User. The administrator displays the Add a User Dialog box.
2. In the User ID field, enter the name of the user: *CSR1*
3. Accept the UID generated by OnDemand.
4. Set the user's initial password to the userid. In the Password field, enter: *CSR1*
5. In the Verify Password, enter: *CSR1*
6. In the Description field, enter: *Customer Service Representative*
7. In the User Type area, select User Administrator. The user will be able to maintain userids on the system.

8. Click the User Information tab.
9. Complete the fields on the User Information page, such as the Name, Department, and Phone Number.
10. Click the General tab.

The user will obtain application group and folder permissions from a group. We'll add the user to the group when we define the group. Therefore, we do not need to add the user to application groups, folders, or groups at this time.

Figure 4 shows an example of the Add a User dialog box with the basic information completed.



Figure 4. Add a User Dialog Box - Basic Information

11. At this point, the properties of the user meet the requirements. Click OK to add the user.

Let's use the Copy command to add another user.

1. First, in the administrator window, point to the CSR1 user and click the right mouse button. From the pop-up menu, select Copy. The administrator displays the Add a User Dialog box.
2. In the User ID field, replace *CSR1* with *CSR2*
3. Accept the GID generated by OnDemand.

4. Set the user's initial password to the userid. In the Password field, enter: *CSR2*
5. In the Verify Password, enter: *CSR2*
6. In the User Type area, select User.
7. Click the User Information tab.
8. Replace the information in the fields on the User Information page.
9. Click the General tab.

Figure 5 shows an example of the Add a User dialog box with the basic information completed.



Figure 5. Add a User Dialog Box - Basic Information

10. At this point, the properties of the user meet the requirements. Click OK to add the user.

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## Chapter 12. Adding groups

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### The basics

In general, here is how you work in the administrator interface to add a group:

1. Identify the library server and select Groups.
2. Pick one of two ways to add a group.
3. Define the properties of the group by completing fields in the Add a Group dialog box. More details are provided in “Chapter 17. Add a Group dialog box” on page 115.
4. Optionally add users to the group.
5. Optionally add the group to application groups and set application group permissions. More details are provided in “Application Group Permissions page” on page 116.
6. Optionally add the group to folders and set folder permissions. More details are provided in “Folder Permissions page” on page 119.
7. When finished, add the group by clicking OK in the Add a Group dialog box.

**Note:** To add a group, the logon user must be a system administrator.

#### Identify the server

1. On the left side of the administrator window, click the name of the library server where you want to add the group.
2. Expand the areas of the library server. Double click the server name or click the + (plus) to the left of the server name.
3. Select Groups.

#### Two ways to add a group

This section explains how to add a group by using the New Group command. You can also add a group by copying an existing group definition.

#### New Group command

From the File menu, select New Group. The administrator displays the Add a Group dialog box.

## Copy command

You can use the copy command to add a group. In the Name list, point to the group that you want to copy and click the right mouse button. Select Copy from the pop-up menu. The administrator displays the Add a Group dialog box. The fields in the dialog box contain information copied from the group you selected. At a minimum, you need to change the group name (group names must be unique to the library server).

## Adding users

You can add one or more users to the group. Complete the following steps to add a user to a group.

1. From the List of Users list, select the user.
2. Click Add. The administrator moves the user to the Users in the Group list.

To remove a user from the group, select the user in the Users in the Group list and click Remove.

## Adding the group

In the Add a Group dialog box, click OK. The administrator adds the group to the database and returns to the administrator window.

---

## Examples

First, let's review the requirements of the groups that need to access the telephone bill reports.

- Customer service group. Users that belong to the group can open the telephone bill report folder and query documents stored in the telephone bill report application group. When we define the report to the system, we'll add the group to the application group and the folder. We need to identify a group owner. The group owner can add new customer service users to the group and remove users from the group.
- Customer XYZ group. Users that belong to the group can also open the telephone bill report folder and query documents stored in the telephone bill report application group. However, we'll limit access to documents that contain a specific customer name and account number. When we define the report to the system, we'll add the group to the application group and the folder and set up the necessary restrictions.
- Users. We add the users we defined in "Chapter 11. Adding users" on page 47 to the groups.



## Adding the customer service group

Let's use the New Group command to add the group.

1. First, point to Groups and click the right mouse button. From the pop-up menu, select New Group. The administrator displays the Add a Group Dialog box.
2. In the Name field, enter the name of the group: *CustomerService*
3. Accept the GID generated by OnDemand.
4. From the Group Owner list, select the user that can add users to and remove users from the group: CSR1

**Note:** The user that you select does not obtain permissions from the group unless you add the user to the group (see step 6). However, a group owner can add their userid to the group at any time.

5. In the Description field, enter: *Access to Telephone Bill Reports; call Leonard Little, x90565, for more information*
6. From the List of Users list, select and add users to the group: CSR1, CSR2, CSR3, CSR4, and CSR5

Figure 6 on page 54 shows the Add a Group dialog box with the basic information completed.



Figure 6. Add a Group Dialog Box

7. At this point, the properties of the group meet the requirements. Click OK to add the group.

### Adding the Customer XYZ group

Let's use the Copy command to add the group.

1. First, in the administrator window, point to the Customer Service group and click the right mouse button. From the pop-up menu, select Copy. The administrator displays the Add a Group Dialog box.
2. In the Name field, replace *CustomerService* with *Customer XYZ*
3. Accept the GID generated by OnDemand.
4. Since we want a system administrator to maintain the group, do not assign a group owner. In the Group Owner list, replace CSR1 with \*NONE.
5. Replace the contents of the Description field with: *Access to Telephone Bill Reports by Customer XYZ*
6. From the Users in the Group list, remove CSR1, CSR2, CSR3, CSR4, and CSR5.
7. From the List of Users list, add XYZ1.

Figure 7 shows the Add a Group dialog box with the basic information completed.



Figure 7. Add a Group Dialog Box

8. Click OK to add the group.



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# Chapter 13. Adding server printers

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## The basics

In general, here is how you work in the administrator interface to add a server printer:

1. Identify the library server and select Printers.
2. Pick one of two ways to add a server printer.
3. Define the properties of the server printer by completing fields in the Add a Printer dialog box. More details are provided in “Chapter 18. Server printer reference” on page 121.
4. When finished, add the server printer by clicking OK in the Add a Printer dialog box.

**Note:** To add a server printer, the logon user must be a system administrator.

### Identify the server

1. On the left side of the administrator window, click the name of the library server where you want to add the server printer.
2. Expand the areas of the library server. Double click the server name or click the + (plus) to the left of the server name.
3. Select Printers.

### Two ways to add a server printer

This section explains how to add a server printer by using the New Printer command. You can also add a server printer by copying an existing server printer definition.

#### New Printer command

From the File menu, select New Printer. The administrator displays the Add a Printer dialog box. Figure 8 on page 59 shows an example of the Add a Printer dialog box.

#### Copy command

You can use the copy command to add a server printer. In the Name list, point to the server printer that you want to copy and click the right mouse button. Select Copy from the pop-up menu. The administrator displays the Add a Printer dialog box. The fields in the dialog box contain information

copied from the server printer you selected. At a minimum, you need to change the name (printer names must be unique to the library server).

### Adding the server printer

In the Add a Printer dialog box, click OK. The administrator adds the server printer to the database and returns to the administrator window.

---

## Examples

We're going to add a server printer that can be used as the default server printer for the application that we'll define in "Chapter 15. Adding a report" on page 67. The physical printer resides in the customer service department. By default, when users of the telephone bill report application select a document and choose the server printer command, OnDemand sends the document to this print device.

### Adding the server printer

Let's use the New Printer command to add the server printer.

1. First, point to Printers and click the right mouse button. From the pop-up menu, select New Printer. The administrator displays the Add a Printer dialog box.
2. In the Name field, enter the name of the server printer: *Customer Service InfoPrint 60*
3. In the Description field, enter: *Customer Service printer; default server printer for the telephone bill report application; call x90565 for more information*
4. In the Server Queue Name, enter: *ip60cs*
5. Accept the default Printer Type of *Printer*

Figure 8 on page 59 shows the completed Add a Printer dialog box.

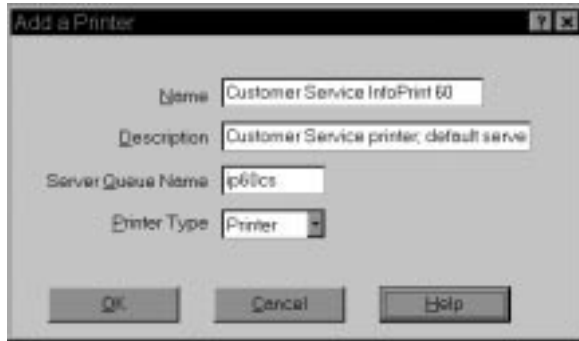


Figure 8. Add a Printer Dialog Box

6. At this point, the properties of the server printer meet the requirements. Click OK to add the server printer.





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## Chapter 14. Adding storage sets and storage nodes

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### The basics

In general, here is how you work in the administrator interface to add a storage set:

1. Identify the library server and select Storage Sets.
2. Pick one of two ways to add a storage set.
3. Define the properties of the storage set by completing fields in the Add a Storage Set dialog box. More details are provided in “Add a Storage Set dialog box” on page 123.
4. Add a primary storage node to the storage set by completing the fields in the Add a Primary Node dialog box. More details are provided in “Defining storage nodes” on page 124.
5. When finished, add the storage set by clicking OK in the Add a Storage Set dialog box.

**Note:** To add a storage set, the logon user must be a system administrator.

#### Identify the server

1. On the left side of the administrator window, click the name of the library server where you want to add the storage set.
2. Expand the areas of the library server. Double click the server name or click the + (plus) to the left of the server name.
3. Select Storage Sets.

#### Two ways to add a storage set

This section explains how to add a storage set by using the New Storage Set command. You can also add a storage set by copying an existing storage set definition.

##### New Storage Set command

From the File menu, select New Storage Set. The administrator displays the Add a Storage Set dialog box.

##### Copy command

You can use the copy command to add a storage set. In the Name list, point to the storage set that you want to copy and click the right mouse button.

Select Copy from the pop-up menu. The administrator displays the Add a Storage Set dialog box. The fields in the dialog box contain information copied from the storage set you selected. At a minimum, you need to change the Name (storage set names must be unique to OnDemand).

### Adding the storage set

In the Add a storage set dialog box, click OK. The administrator adds the storage set to the database and returns to the administrator window.

---

## Examples

First, let's review the storage requirements of the telephone bill report that we'll define in "Chapter 15. Adding a report" on page 67. Each report that we load into OnDemand must be copied to cache storage. In addition, for longer term storage, we need to copy report data to archive media.

- OnDemand can automatically copy report data to cache storage on the object server where the primary store node resides. However, we need to do two things to make sure this happens. First, we need to define cache storage file systems to OnDemand. Refer to *Installation and Configuration Guide* for more information. Then, we need to specify the correct storage management attributes for the application group. For example, we need to make sure that data is cached on magnetic storage for the required number of days and that OnDemand maintains data stored in the application group for the required number of days.
- Five Year Storage Set. This is the storage set where report data is copied for long term storage. We'll define one primary storage node in the storage set. The primary storage node will identify the object server where the data is stored. The object server is on the same workstation as the library server. On our system, we use ADSM to manage archive media. The primary storage node will identify a node in ADSM.

### Adding the storage set

Let's use the New Storage Set command to add the storage set.

1. First, point to Storage Sets and click the right mouse button. From the pop-up menu, select New Storage Set. The administrator displays the Add a Storage Set Dialog box.
2. In the Name field, enter the name of the storage set: *Five Year Storage Set*
3. In the Description field, enter: *Contact Leonard Little, x90059*
4. Accept the default Load Type of Fixed. This means that OnDemand will store data in the primary storage node where we select the Load Data check box.

Figure 9 shows the Add a Storage Set dialog box with the basic information completed.

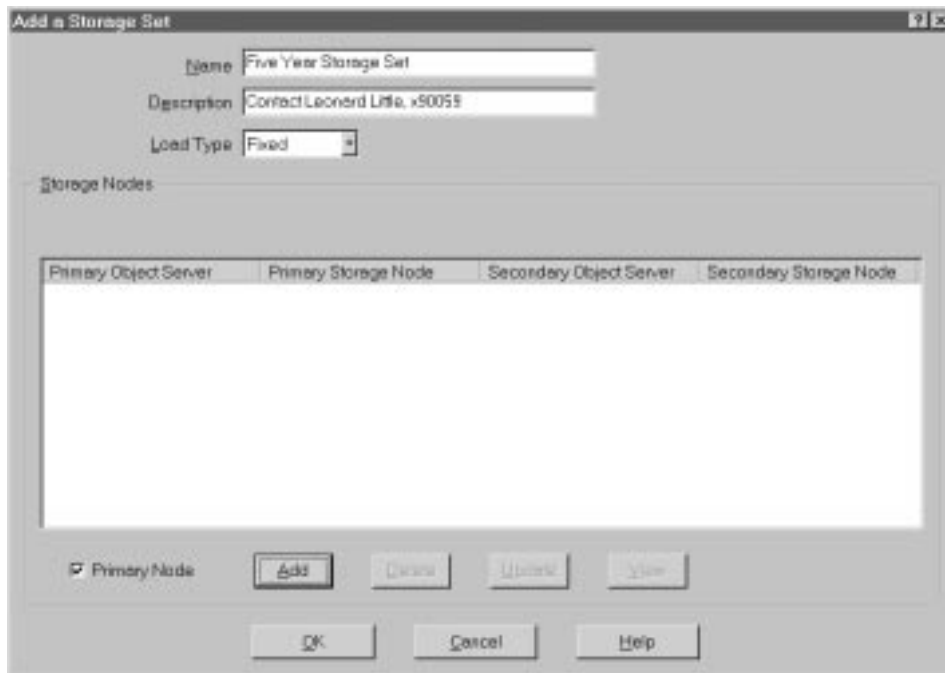


Figure 9. Add a Storage Set Dialog Box - Basic Information

5. Next, we'll add a primary storage node to the storage set. In the Storage Nodes area, click Add. The administrator displays the Add a Primary Node dialog box.
6. Accept the default Object Server of \*ONDEMAND. This means that the object server (and primary storage node) reside on the same workstation as the library server.
7. In the Storage Node field, enter: *FiveYearPSN1*. This is the name of the primary storage node. On our system, we use the same name for the primary storage node and its associated ADSM storage node.
8. In the Description field, enter: *Five year storage node on ADSM-maintained archive media; contact Leonard Little, x90059*
9. In the Logon field, enter: *FiveYearPSN1*. This is the name of the ADSM storage node. On our system, we use the same name for the ADSM storage node and its associated primary storage node.
10. In the Password field, enter: *FiveYearPSN1*. This is the password of the ADSM storage node.
11. In the Verify Password, enter: *FiveYearPSN1*

12. Select the Load Data check box to identify this node as the primary storage node where OnDemand loads data in the storage set.

Figure 10 shows the completed Add a Primary Node dialog box.

The screenshot shows a dialog box titled "Add a Primary Node". It is divided into two sections: "Primary" and "Secondary".

**Primary Section:**

- Object Server: \*ONDEMAND (dropdown menu)
- Storage Node: FiveYearPSN1 (text box)
- Description: Five year storage node on ADS (text box)
- Logon: FiveYearPSN1 (text box)
- Password: [masked]
- Verify Password: [masked]
- Load Data:  (checkbox)
- Cache Only:  (checkbox)

**Secondary Section:**

- Object Server: \*ONDEMAND (dropdown menu)
- Storage Node: \*NONE (dropdown menu)
- Description: [empty]
- Logon: [empty]
- Password: [empty]
- Verify Password: [empty]

At the bottom of the dialog are three buttons: OK, Cancel, and Help.

Figure 10. Add a Primary Node Dialog Box

13. At this point, the properties of the primary storage node meet the requirements. Click OK to add the primary storage node to the storage set and return to the Add a Storage Set window.
14. Figure 11 on page 65 shows the completed Add a Storage Set dialog box.

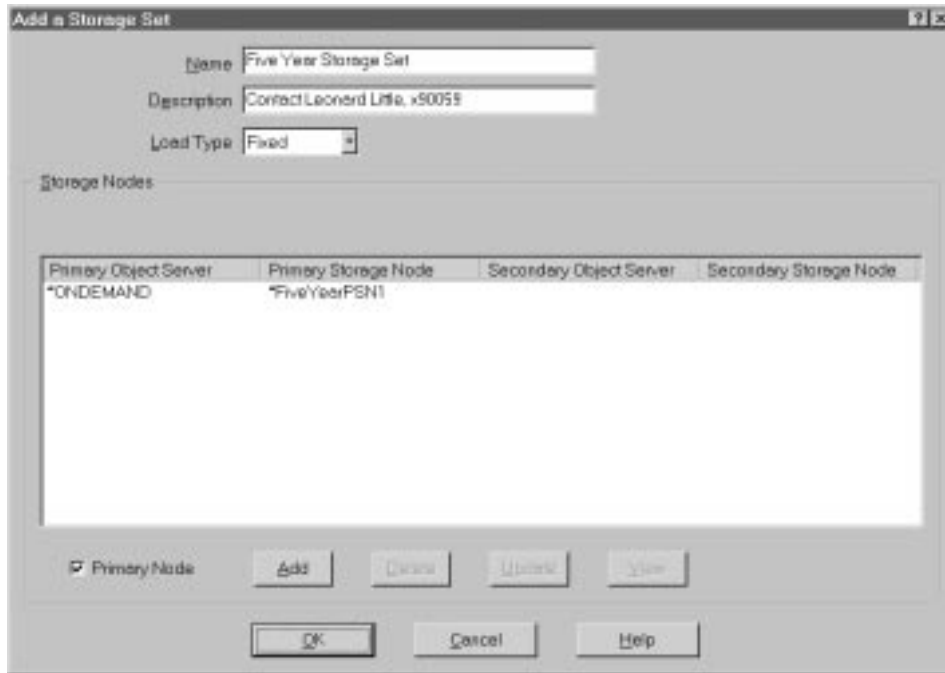


Figure 11. Add a Storage Set Dialog Box - Completed

At this point, the properties of the storage set meet the requirements. Click OK. The administrator adds the storage set to the database and returns to the administrator window.



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## Chapter 15. Adding a report

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### The basics

In general, here is how you work in the administrator interface to define a report to the system:

1. Identify the library server. On the left side of the administrator window, click the name of the library server where you want to define the report.
2. Select the area. First expand the areas of the library server. Double click the server name or click the + (plus) to the left of the server name. Then select the area.

When you define a report to the system, you typically add an application group, an application, and a folder.

- The application group identifies database and storage management information.
  - The application identifies viewing, indexing, loading, and printing information.
  - The folder provides users the ability to search for, retrieve, view, and print report data.
3. Pick one of two ways to add an application group, an application, and a folder. For example, use one of the following methods to add an application group:
    - Add a new application group. From the File menu, select New Application Group. The administrator displays the Add an Application Group dialog box.
    - Copy an existing application group. In the Name list, point to the application group that you want to copy and click the right mouse button. Select Copy from the pop-up menu. The administrator displays the Add an Application Group dialog box. The fields in the dialog box contain information copied from the application group you selected. At a minimum, you need to change the Name (application group names must be unique to the library server).
  4. Define the properties of the application group, application, and folder.
  5. When finished, add the application group, application, and folder by clicking OK in the add dialog box.

**Note:** To add an application group, the logon user must be a system administrator, an application group/folder administrator, or a user with create application groups authority.

To add an application, the logon user must be a system administrator, an application group/folder administrator, or a user with create application groups authority.

To add a folder, the logon user must be a system administrator, an application group/folder administrator, or a user with create folders authority.

---

## **An example**

This section describes how to define a sample telephone bill report to the system.

### **About the report**

A telephone bill report typically contains hundreds of pages of line data. The report is logically segmented into statements. Users search for statements using a date and any combination of account number and customer name. We want to format the line data into pages and enhance the appearance of the output with images and fonts.

Most queries about a statement occur in the first 60 days after it is mailed to the customer. Little or no activity occurs a year after a statement is generated. For legal reasons, we need to keep a statement for five years. We expect the system to maintain index information in the most efficient way possible.

Two groups of users need to access the telephone bill reports. The customer service department is responsible for handling queries from customers. They answer questions about the statements, attach annotations to statements, and reprint and FAX a replica of original statements. As part of our enhanced customer service initiative, we're allowing Customer XYZ to access the system and retrieve and view their statements.

### **About the application group**

Before we add the application group, let's review the database and storage management requirements.

#### **Database requirements**

Database requirements can be grouped in two categories: database tables and the database fields.

#### **Database tables:**

- Index data is stored in SMS table spaces
- A database table contains index data from one or more reports



- Data is managed by OnDemand
- An annotation field is not required in the database
- The date field is the segment field for the application group

**Database fields:**

- Three database fields: account number, customer name, and report date
- Account number is the index, data type string, 16 bytes. However, we plan to store only 13 bytes in the database, removing the - (dash) characters from the account number string.
- Customer name is a filter, data type string, 30 bytes
- Report date is a filter, data type date

**Storage management requirements**

The storage management requirements determine where, how, and how long OnDemand maintains the report and index data.

- Maintain a report for five years
- Cache documents for 60 days
- Copy documents to archive media when the report is loaded into the system
- After one year, migrate index data to archive media
- If we need to import migrated index data, maintain the imported index data for 30 days
- Delete a table of index data at a time

**Adding the application group**

Let's use the New Application Group command to add the application group.

1. First, point to Application Groups and click the right mouse button. From the pop-up menu, select New Application Group. The administrator displays the Add an Application Group dialog box.  
The pages of the Add an Application Group dialog box organize information about the application group into sections. The tabs show which page you are on: General, Message Logging, Storage Management, Permissions, Field Definition, and Field Information.
2. We'll start by completing the General page. In the Name field, enter the name of the application group.
3. In the Description field, enter up to 120 characters of descriptive information about the application group.
4. Based on our database requirements, we can accept the recommended defaults for the rest of the fields on the General page. If you need more information about the fields and choices, refer to the online help.

Figure 12 shows the completed General page.

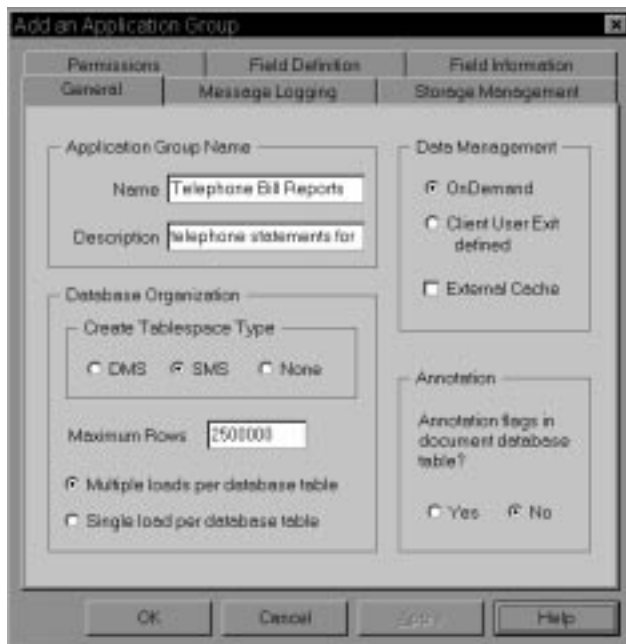


Figure 12. General Page

5. Select the Message Logging tab to identify the types of application group messages we want OnDemand to write to the system logging facility.
6. Select the Database Queries check box. In addition to Retrieval and Server Printing messages, we want OnDemand to write a message to the system logging facility whenever a user queries the application group. We'll use this information to generate system performance reports.

Figure 13 on page 71 shows the completed Message Logging page.



Figure 13. Message Logging Page

7. Select the Storage Management tab to provide information that OnDemand uses to manage data stored in the application group.
8. From the Storage Set Name list, select the name of the storage set OnDemand will use to maintain the report in cache storage and on archive media. We defined the storage set in “Chapter 14. Adding storage sets and storage nodes” on page 61. The storage set identifies the object server, primary storage node, and ADSM storage node. OnDemand caches the report on the object server where the primary storage node resides.
9. Change the Length of Time to Cache Data on Magnetic. We want OnDemand to maintain each document in cache storage for 60 days. After that time, when a user views or prints a document, OnDemand retrieves the document from archive media.
10. Accept the default Length of Time before copying Cache to Archive Media. We want OnDemand to copy documents to archive media when the report is loaded into the system.
11. Change the Length of Time before migrating Indexes. We want OnDemand to maintain each index table in the database for 365 days. After that time, OnDemand migrates the table from the database to archive media.

12. Accept the default Length of Time to keep imported migrated Indexes. If we need to import a table of index data from archive media to the database, we want OnDemand to wait 30 days before deleting the table.
13. Change the Life of Data and Indexes. This is the number of days (1825, five years) that we want OnDemand to maintain index data, documents, and resources related to the report. After this time, OnDemand can delete the report from the system.
14. Accept the default Expiration Type (Segment). We want OnDemand to delete a table of index data at a time.

Figure 14 shows the completed Storage Management page.

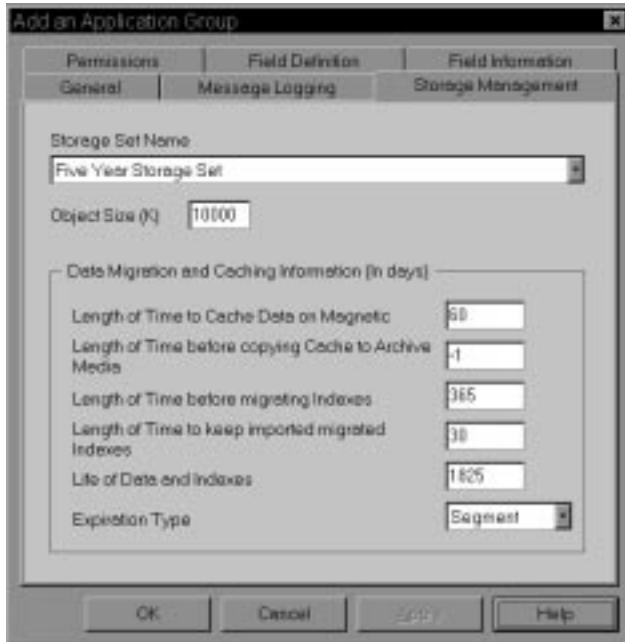


Figure 14. Storage Management Page

15. Select the Permissions tab to identify the types of report and application group functions that users can perform. For example, we can let users query report data, create logical views, print and FAX pages of the report, and maintain the application group. We can establish permissions at the application group level, the group level, and the user level. By default, the person that creates the application group is given full application group permissions; no other users can access report data or maintain the application group. On our system, other users obtain permissions from a group. We added groups in “Adding the customer service group” on page 53 and “Adding the Customer XYZ group” on page 54 .

16. First, add the customer service group. From the User/Groups list, select +CustomerService.
17. Select the Access check box.
18. Click Add.
19. Next, add the Customer XYZ group. From the User/Groups list, select +CustomerXYZ.
20. In the Annotation area, clear the View check box. OnDemand also clears the Add check box. Customer XYZ users can view, print, FAX, and copy documents but do not have permission to use the annotation tools provided by OnDemand.
21. Click Add.

Figure 15 shows the completed Permissions page.

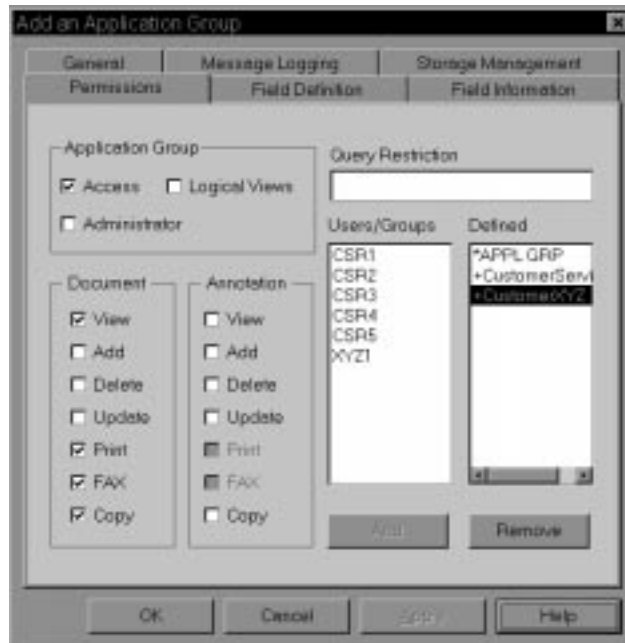


Figure 15. Permissions Page

22. Select the Field Definition tab to define the database fields. We need to define three database fields for the telephone bill report:
  - Account number
  - Customer name
  - Report date

To define a database field, enter the name of the field in the Database Field Name field and click Add.

Figure 16 shows the completed Field Definition page.



Figure 16. Field Definition Page

23. Select the Field Information tab to define the attributes of the database fields.
24. First, define field information for the account number field.
  - From the Type list, select Index
  - Enter the string length (13)

Figure 17 on page 75 shows the Field Information page for the account number field.

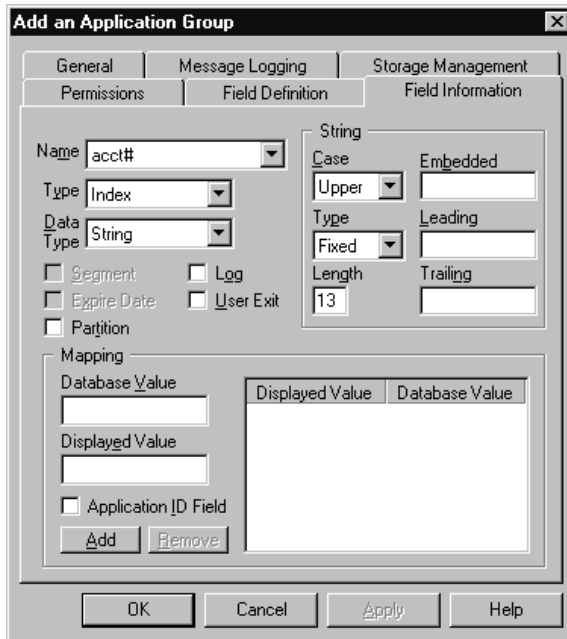


Figure 17. Field Information Page

25. Next, define field information for the customer name field.
  - From the Name list, select custname
  - From the Type list, select Variable
  - In the Length field, enter 30

Figure 18 on page 76 shows the Field Information page for the customer name field.

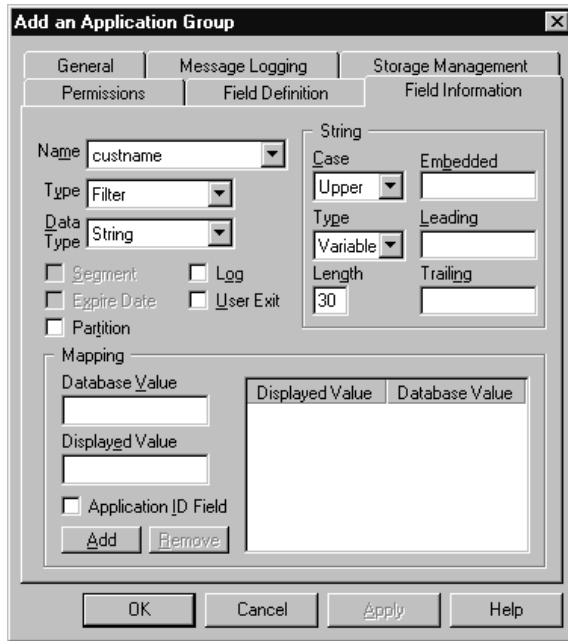


Figure 18. Field Information Page

26. Next, define field information for the report date field.
- From the Name list, select rdate
  - From the Data Type list, select Date
  - Select the Segment check box

Figure 19 on page 77 shows the Field Information page for the report date field.



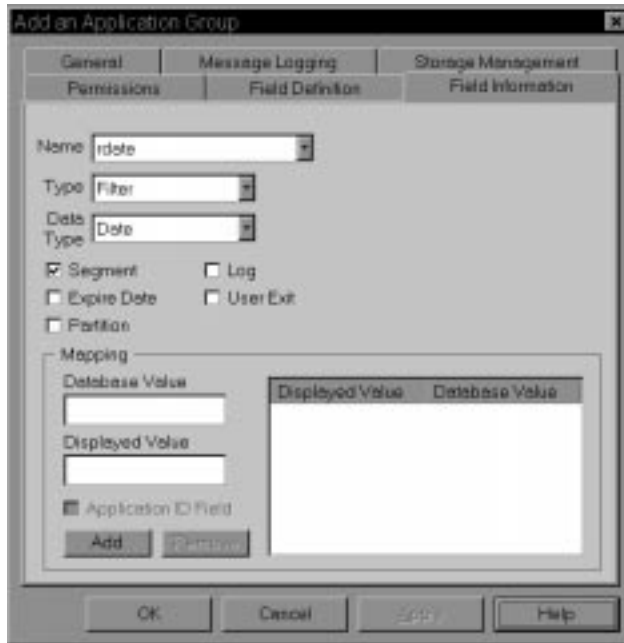


Figure 19. Field Information Page

27. At this point, the properties of the application group meet the requirements. Click OK in the Add an Application Group window. The administrator adds the application group to the database and returns to the administrator window.

## About the application

Before we add the application, let's review the viewing, indexing, and loading requirements.

### Viewing requirements

- Source (line) data stored in OnDemand as AFP data
- Format data into pages and enhance the appearance with images and fonts
- Retrieve statements of one or more pages
- Define a default printer for the application. The default printer is where OnDemand sends documents when users select the server print command.

### Indexing requirements

- Source data is EBCDIC, code page 500
- Segment report into groups of pages, one statement in each group
- Identify the beginning of a statement using:

Skip-to-channel one (X'F1')

PAGE 1 (X'D7C1C7C54040F1')

- Generate three indexes for each statement: statement date, account number, and customer name
- Collect resources

#### **Loading requirements**

- Compress and store data in the most efficient method possible
- Application group database field names and index names match
- Date format is Mth d, yyyy
- Remove embedded - (dash) character from account number before storing value in the database

### **Adding the application**

Let's use the New Application command to add the application.

1. First, point to Applications and click the right mouse button. From the pop-up menu, select New Application. The administrator displays the Add an Application dialog box.  
The pages of the Add an Application dialog box organize information about the application into sections. The tabs show which page you are on: General, View Information, Indexer Information, Load Information, Logical View Fields, Logical Views, and Print Options.
2. We'll start by completing the General page. In the Name field, enter the name of the application.
3. In the Description field, enter information about the application.
4. Click Select to add the application to an application group. The administrator displays the Application Groups dialog box.
5. From the Names list, select Telephone Bill Reports.
6. Click OK.

Figure 20 on page 79 shows the completed General page.

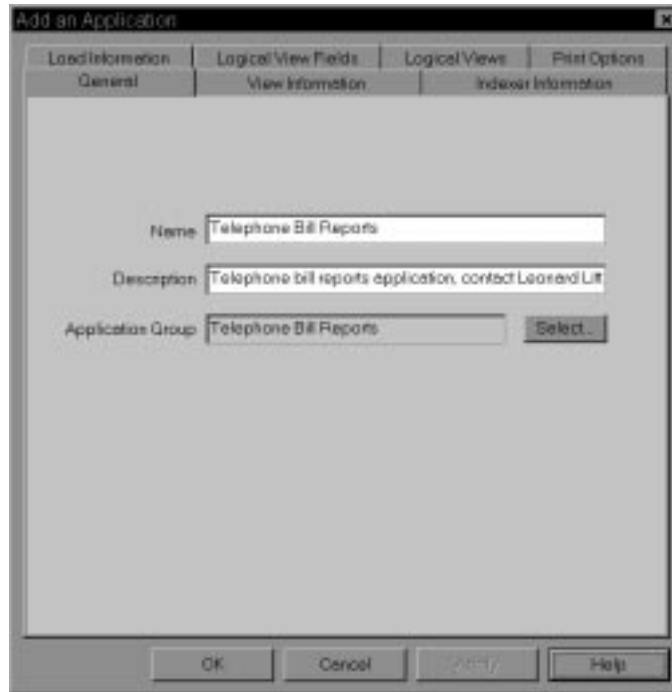


Figure 20. General Page

7. Select the View Information tab to specify information needed by OnDemand client programs to display the telephone bill report. This information is also used by the indexing program.
8. From the Data Type list, select Line.  
Even though we plan to store the report in OnDemand as AFP data, we initially set the Data Type to Line so we can process a sample of the source data with the graphical indexer. After generating the indexing parameters, we will reset the Data Type to AFP by selecting CONVERT=YES on the Data Format page of the ACIF Indexer Properties dialog box.
9. In the RECFM area, select Fixed. The report contains fixed length records, 133 bytes in length.  
Figure 21 on page 80 shows the View Information page.



Figure 21. View Information Page

10. Select the Indexer Information tab.
11. From the Indexer list, select ACIF.
12. We'll process a sample report using the graphical indexer. In the Parameters Source area, select Sample Data.
13. Click Modify. The administrator displays the Open dialog box.
14. Select the name of the file that contains the sample report data.
15. Click Open. The administrator loads the file into the report window.  
Figure 22 on page 81 shows the report window.

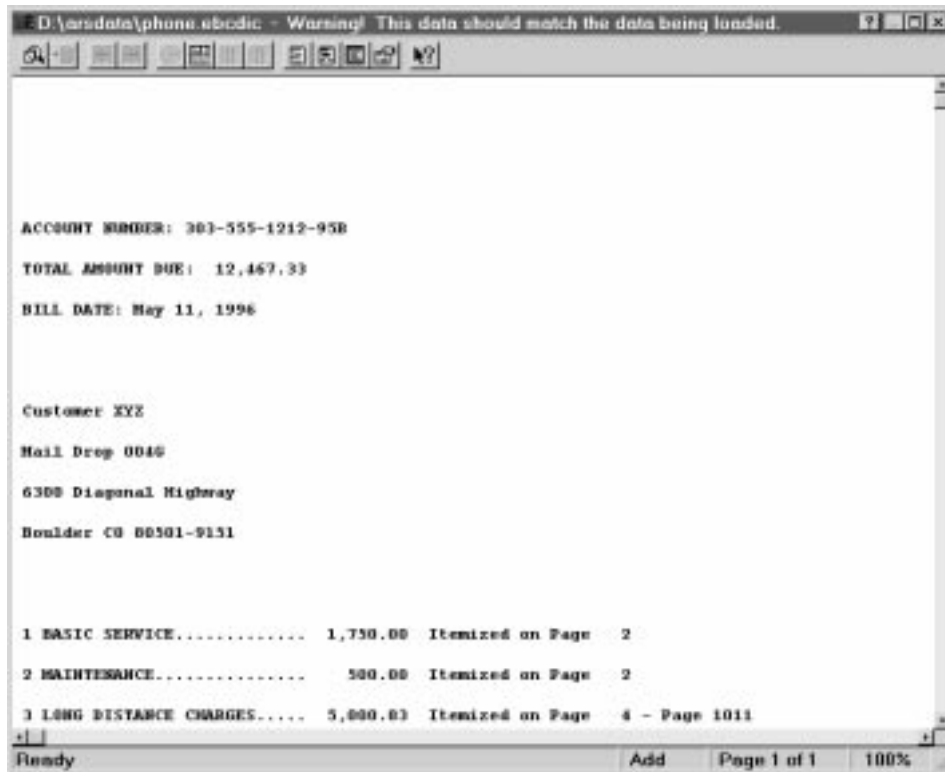


Figure 22. Report Window

16. Define trigger number one. First, select any blank column in the first record. Click the Add a Trigger icon. The administrator displays the Add a Trigger dialog box.
17. In the Columns to Search area, select Carriage Control.  
Figure 23 on page 82 shows the completed Add a Trigger dialog box for Trigger1.

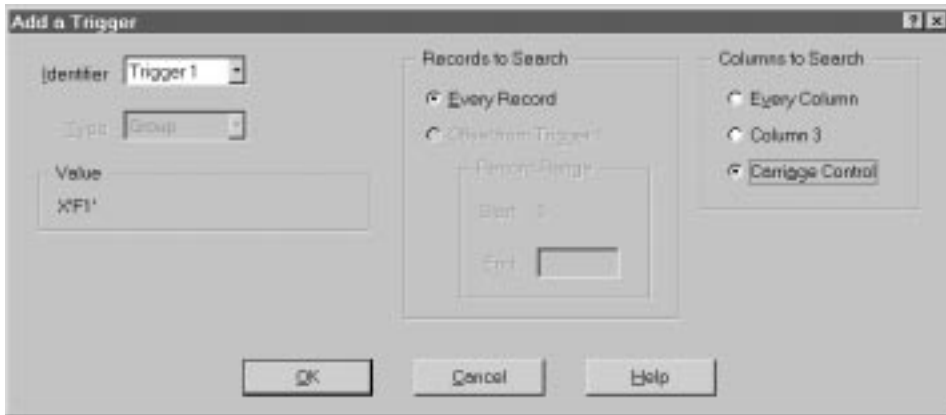


Figure 23. Add a Trigger Dialog Box

18. Click OK to add the trigger.
19. Define trigger number two. First, select the string PAGE 1. Click the right mouse button. From the pop-up menu, select Trigger. The administrator displays the Add a Trigger dialog box. Figure 24 shows the completed Add a Trigger dialog box for Trigger2.

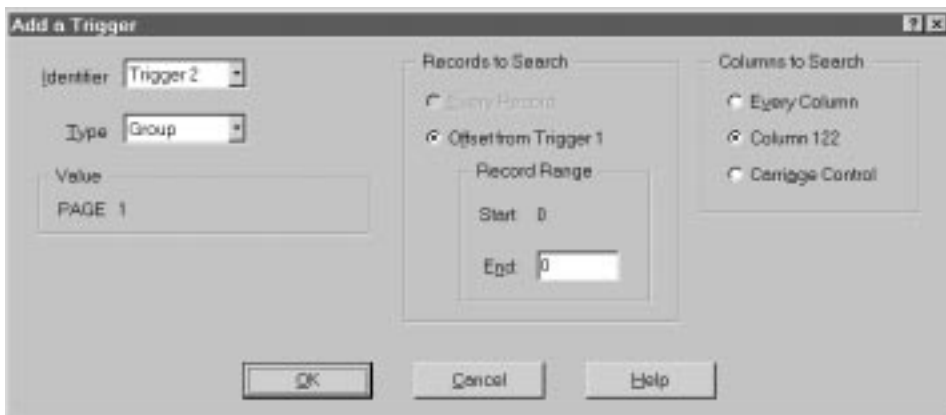


Figure 24. Add a Trigger Dialog Box

20. Click OK to add the trigger.
21. Define field number one. First, select the string Customer XYZ and enough blank characters to the right of the string to reserve enough space to hold the largest index value (30 characters) the field can contain. Then click the right mouse button. From the pop-up menu, select Field. The administrator displays the Add a Field dialog box.
22. From the Trigger list, select Trigger2.

Figure 25 shows the completed Add a Field dialog box for Field1.

The screenshot shows a dialog box titled "Add a Field" with a close button (X) in the top right corner. The dialog contains a tab labeled "ACIF Field Information". Inside the tab, there are several input fields and buttons:

- Identifier:** A dropdown menu with "Field 1" selected.
- Trigger:** A dropdown menu with "Trigger 2" selected.
- Default Value:** An empty text box.
- Base:** A dropdown menu with "0" selected.
- Constant Value:** An empty text box.
- Field Length:** A text box with "30" entered.
- Records to Search:** A text box with "Offset from Trigger: 7".
- Columns to Search:** A text box with "Offset from Base: 3".
- Reference String:** A text box containing "CustomerXYZ".
- Buttons:** "OK", "Cancel", "Apply", and "Help" are located at the bottom of the dialog.

Figure 25. Add a Field Dialog Box

23. Click OK to add the field.
  24. Define field number two. First, select the string May 11, 1996. Then click the right mouse button. From the pop-up menu, select Field. The administrator displays the Add a Field dialog box.
  25. From the Trigger list, select Trigger2.
- Figure 26 on page 84 shows the completed Add a Field dialog box for Field2.

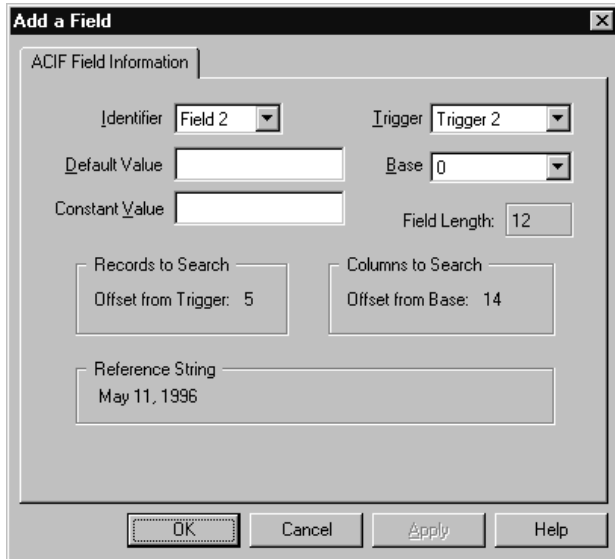


Figure 26. Add a Field Dialog Box

26. Click OK to add the field.
27. Define field number three. First, select the string 303-555-1212-95B. Then click the right mouse button. From the pop-up menu, select Field. The administrator displays the Add a Field dialog box.
28. From the Trigger list, select Trigger2.  
Figure 27 on page 85 shows the completed Add a Field dialog box for Field3.



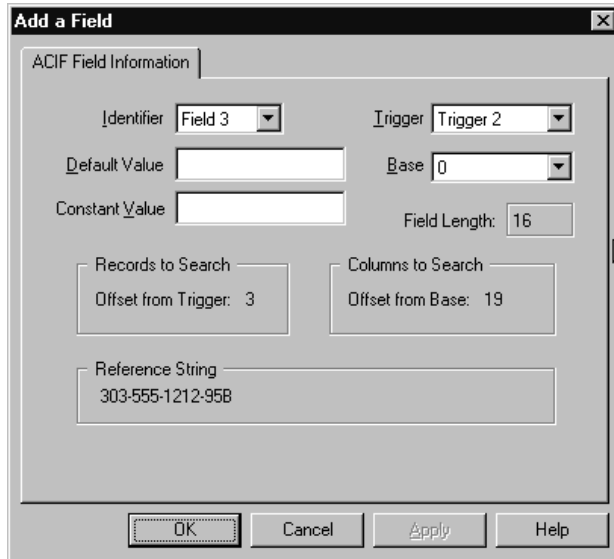


Figure 27. Add a Field Dialog Box

29. Click OK to add the field.
30. Define index number one. First, clear any selected areas of the report. Click the Add an Index icon. The administrator displays the Add an Index dialog box.
31. From the Attribute list, select custname.
32. In the Break area, select No.
33. From the Fields list, select Field1. Then click Add.  
Figure 28 on page 86 shows the completed Add an Index dialog box for Index1.

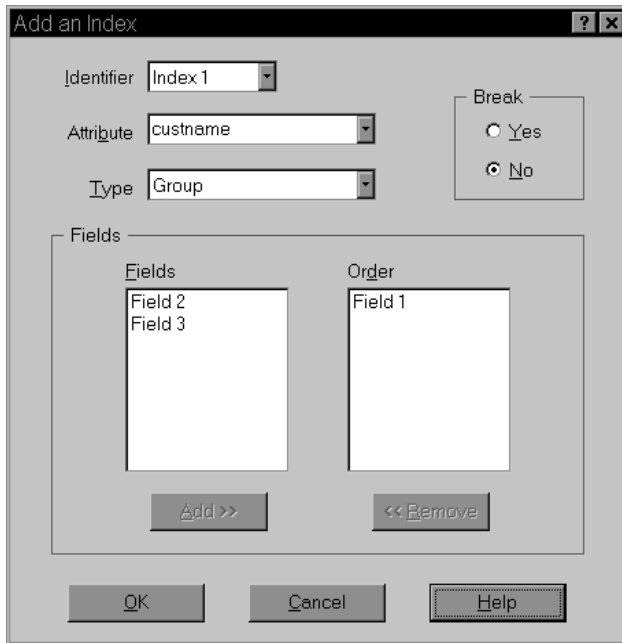


Figure 28. Add an Index Dialog Box

34. Click OK to add the index.
35. Define index number two. In the report window, click the right mouse button and select Index from the pop-up menu. The administrator displays the Add an Index dialog box.
36. From the Attribute list, select rdate
37. In the Break area, select No.
38. From the Fields list, select Field2. Then click Add.  
Figure 29 on page 87 shows the completed Add an Index dialog box for Index2.

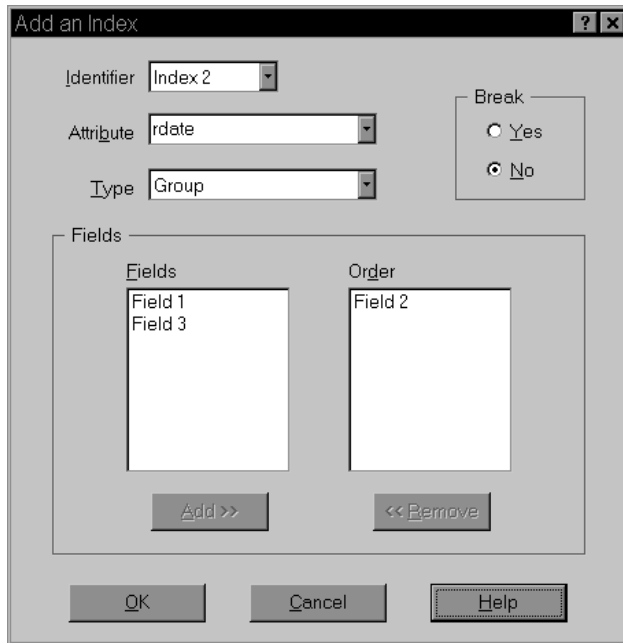


Figure 29. Add an Index Dialog Box

39. Click OK to add the index.
  40. Define index number three. In the report window, click the right mouse button and select Index from the pop-up menu. The administrator displays the Add an Index dialog box.
  41. From the Attribute list, select acct#.
  42. From the Fields list, select Field3. Then click Add.
- Figure 30 on page 88 shows the completed Add an Index dialog box for Index3.

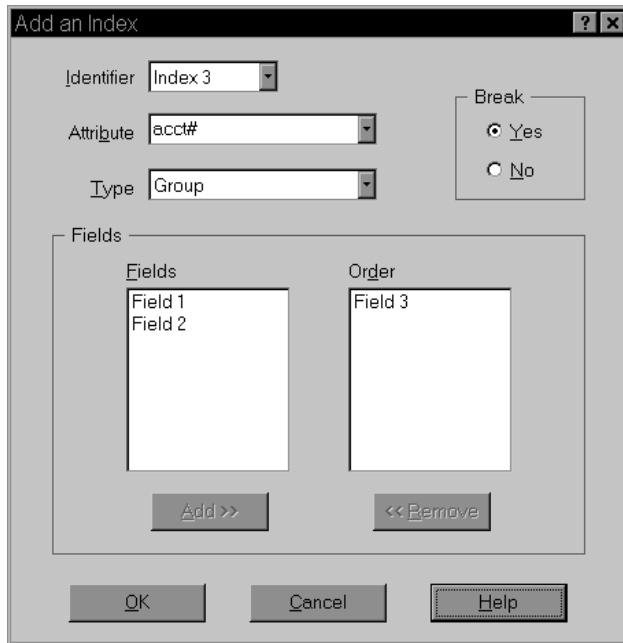


Figure 30. Add an Index Dialog Box

43. Click OK to add the index.
44. Click the ACIF Indexer Properties icon. The administrator displays the ACIF Indexer Properties dialog box.
45. On the Data Format page, change the Data Conversion field to Yes. We want ACIF to convert the input line data to AFP.  
When we change Data Conversion to Yes, the administrator automatically changes the Data Type on the View Information page to AFP.
46. Click the Resource Information tab to identify the resources required to view the report.
47. Enter the name of the form definition. This is the AFP object that determines how data is placed on a page.
48. Enter the name of the page definition. This is the AFP object that determines other resources required to view a page.
49. In the Resource File Contents area, select the Form Definitions, Page Segments, and Overlays check boxes. These are the resources we want ACIF to collect.
50. In the Search Paths area, enter the full path name of the directories where the indexing program can locate the required resources.  
Figure 31 on page 89 shows the completed Resource Information page.

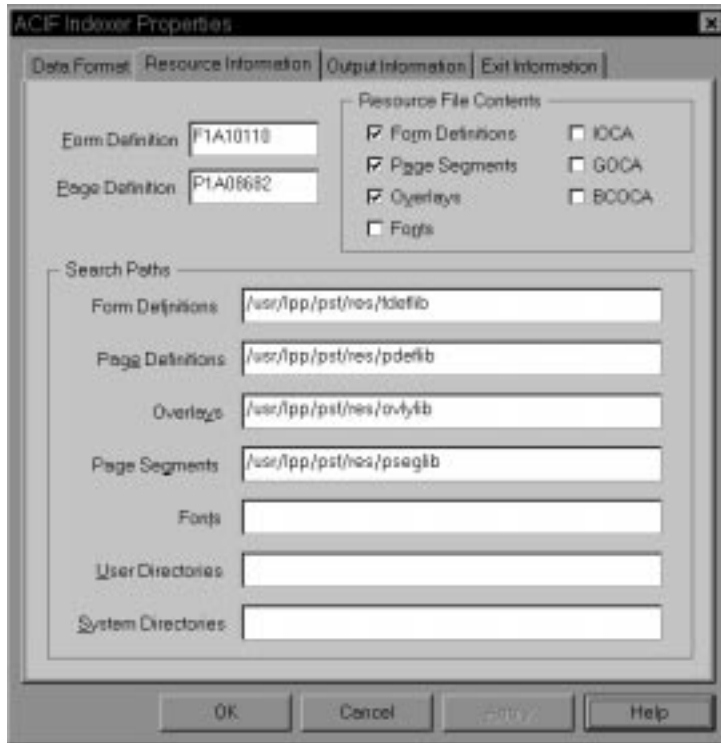


Figure 31. Resource Information Page

51. Click OK to close the ACIF Indexer Properties dialog box.
52. Close the report window, saving the changes.

Figure 32 on page 90 shows the completed Indexer Information page.

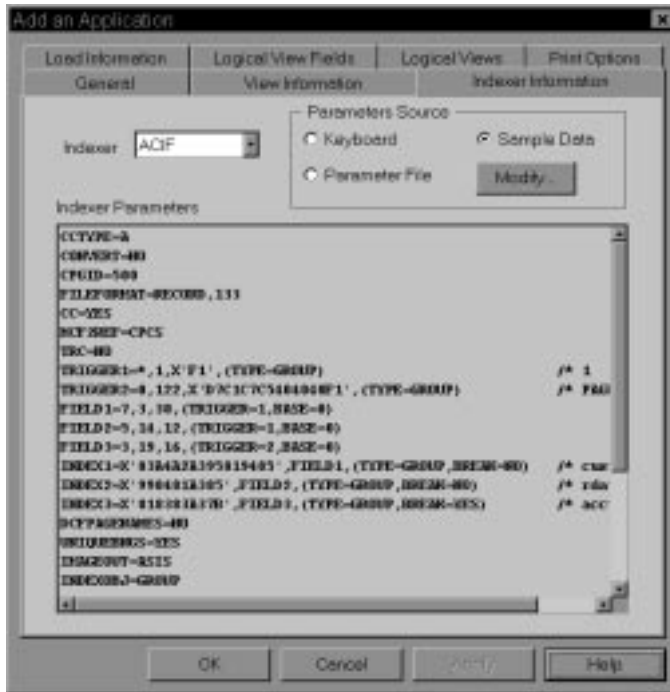


Figure 32. Indexer Information Page

53. Select the Load Information tab to specify information that OnDemand uses to process the index data before storing it in the database.
54. In the Application Group DB Name list, select rdate. We need to identify the format of the date as it appears in the report.
55. From the format list, select %b %e, %Y

Figure 33 on page 91 shows the Load Information for the report date field.



Figure 33. Load Information Page

56. In the Application Group DB Name list, select acct#. To conserve space in the database, we want OnDemand to remove the - (dash) character from index values before storing the values in the database.
  57. In the Embedded field, enter the - (dash) character.
- Figure 34 on page 92 shows the Load Information for the account number field.

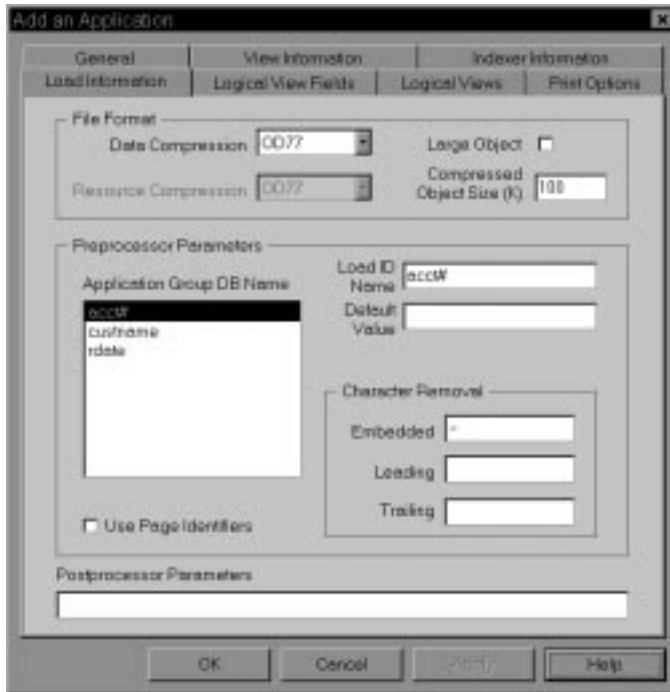


Figure 34. Load Information Page

58. Select the Print Options tab to provide information that OnDemand uses to print the report.
59. From the Default Server Printer list, select ip60cs. This is the printer we defined in “Chapter 13. Adding server printers” on page 57. Figure 35 on page 93 shows the completed Print Options page.





Figure 35. Print Options Page

60. At this point, the properties of the application meet the requirements. Click OK in the Add an Application window. The administrator adds the application to the database and returns to the administrator window.

## About the folder

Before we add the folder, let's review the data access requirements, the types of permissions we need to allow, and the search and display fields we need to define.

### Data access requirements

The folder we're defining allows users to access the telephone bill report application group and the telephone bill report application.

### Permissions

Who needs access to the folder and what types of permissions do these users need?

- Users in the customer service department can open the folder to search for and retrieve statements.

- Users at Customer XYZ can open the folder to search for and retrieve statements that contain their account number and customer name.
- We will define a set of folder fields for the Customer XYZ users. The folder fields will limit access to specific statements.

### **Search and display fields**

We need to define two sets of folder fields:

- One set at the folder level. These folder fields allow users in the customer service department to access any statement in the database.
- One set for the Customer XYZ group. These folder fields allow users at Customer XYZ to access specific statements.

### **Adding the folder**

Let's use the New Folder command to add the folder.

1. First, point to Folders and click the right mouse button. From the pop-up menu, select New Folder. The administrator displays the Add a Folder dialog box.

The pages of the Add a Folder dialog box organize information about the folder into sections. The tabs show which page you are on: General, Permissions, Field Definition, Field Information, and Field Mapping.

2. We'll start by completing the General page. In the Name field, enter the name of the folder.
3. In the Description field, enter up to 120 characters of descriptive information about the folder.
4. Select the Display Document Location check box. This provides users with a visual clue about the type of media used to hold a statement.
5. In the Application Groups list, select Telephone Bill Reports.

Figure 36 on page 95 shows the completed General page.

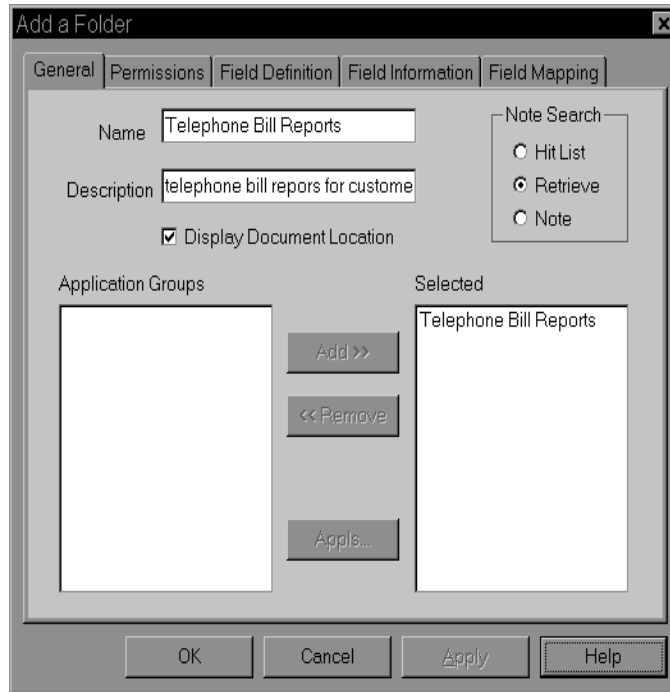


Figure 36. General Page

6. Select the Permissions tab to identify the types of folder functions that users can perform. For example, we can let users open the folder, create private named queries, and maintain folder fields. We can establish permissions at the folder level, the group level, and the user level. By default, the person that creates the folder is given full folder permissions; no other users can open or maintain the folder. On our system, other users obtain permissions from a group. We need to add two groups to the folder. We defined the groups in “Adding the customer service group” on page 53 and “Adding the Customer XYZ group” on page 54.
  7. From the Users and Group list, select +CustomerService.
  8. Select the Access check box.
  9. Click Add, to add the Customer Service group to the folder.
  10. From the Users and Group list, select +CustomerXYZ.
  11. Click Add, to add the Customer XYZ group to the folder.
- Figure 37 on page 96 shows the Permissions page.

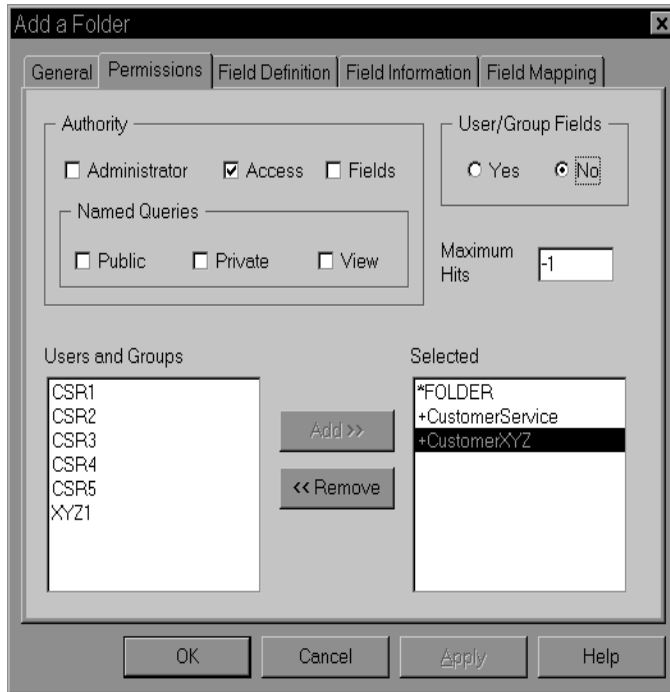


Figure 37. Permissions Page

12. Select the Field Definition tab to define the folder fields. We'll define four folder fields to allow users to search for statements:
  - Account Number, a string field
  - Customer Name, a string field
  - Report Date, a date field
  - Other Information, a text search field
13. Complete the following steps to define a folder field:
  - In the Name field, enter the name of the folder field.
  - In the Description field, enter up to 120 characters of descriptive information about the folder field.
  - From the Field Type list, select the data type of the field.
  - Select the Mapping Type. All of the fields in this example use the Single mapping type.
  - Click Add.

Figure 38 on page 97 shows the completed Field Definition page.

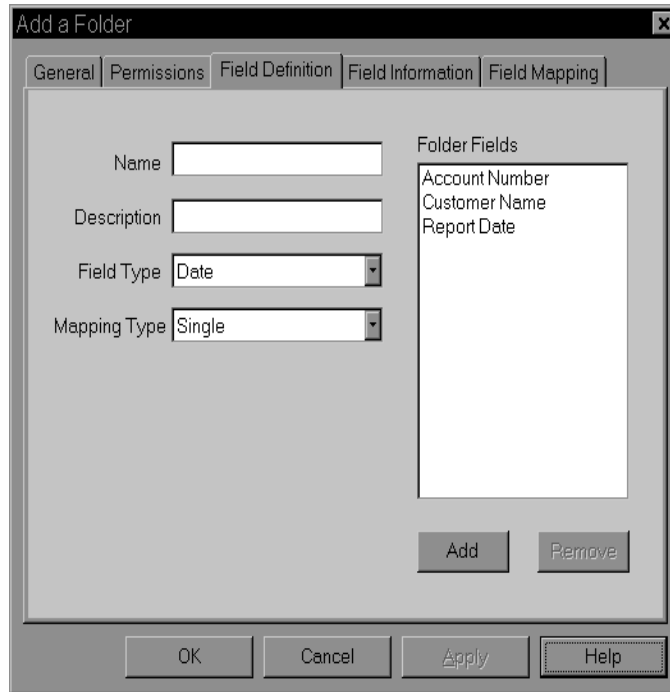


Figure 38. Field Definition Page

14. Select the Field Information tab to define the attributes of the folder fields and, if necessary, define field information for specific users and groups. The field information we define at the folder level provides defaults for the folder fields, unless overridden by user or group field information.
  - At the folder level, accept the default field information for the Account Number, Customer Name, and Other Information fields.
  - At the folder level, specify field information for the Report Date field.
  - For the Customer XYZ group, accept the default field information for the Other Information field and the folder-level field information for the Report Date field.
  - For the Customer XYZ group, specify field information for the Account Number and Customer Name fields.
15. First, define folder-level field information for the Report Date field.
  - From the Name list, select Report Date
  - From the ID list, select \*FOLDER
  - Select the Default check box
  - From the Display Fmt list, select %b %e, %Y
  - From the Defaults Fmt list, select %b %e, %Y

- In the Interval area, select Last, enter a 3 (three) in the entry field, and select Months

Figure 39 shows the Field Information page for the Report Date field.

Figure 39. Field Information Page

16. Next, define field information for the Customer XYZ group. First we need to make a copy of the folder fields. Click the Permissions tab.
17. From the Selected List, select +Customer XYZ.
18. In the User/Group Fields area, click Yes.

Figure 40 on page 99 shows the completed Permissions page.

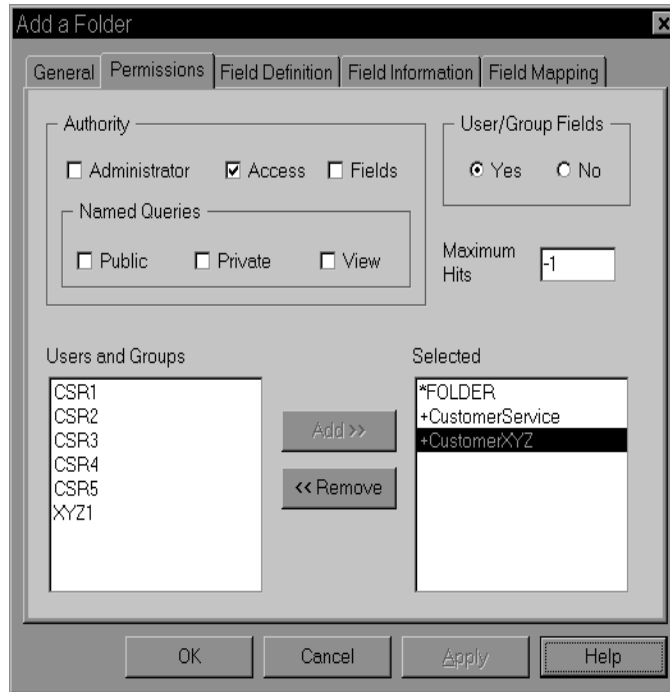


Figure 40. Permissions Page

19. Click the Field Information Tab.
20. Define Customer XYZ field information for the Account Number field.
  - From the Name list, select Account Number
  - From the ID list, select +Customer XYZ
  - From the Query list, select 0 (zero)
  - From the Default list, select Equal
  - Clear the Like check box
  - Select the Default check box
  - Select the Fixed check box
  - In the first Defaults entry field, enter 1234567890123
  - Clear the Append check box

Figure 41 on page 100 shows the Field Information page for the Account Number field.

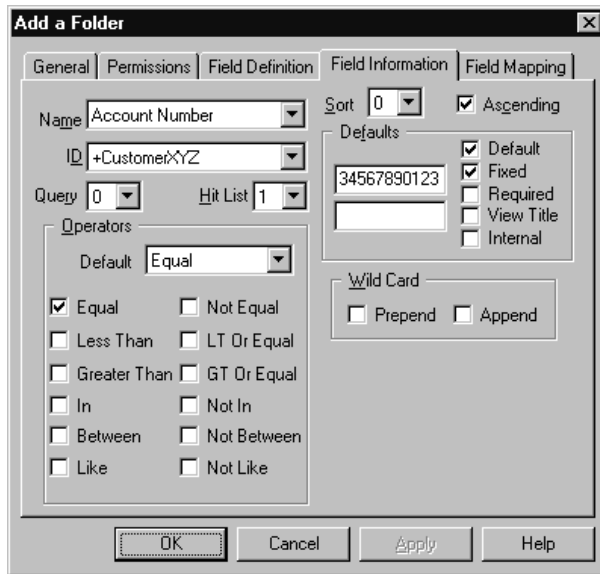


Figure 41. Field Information Page

21. Next, define Customer XYZ field information for the Customer Name field.

- From the Name list, select Customer Name
- From the Query list, select 0 (zero)
- From the Default list, select Equal
- Clear the Like check box
- Select the Default check box
- Select the Fixed check box
- In the first Defaults entry field, enter Customer XYZ
- Clear the Append check box

Figure 42 on page 101 shows the Field Information page for the Customer Name field.



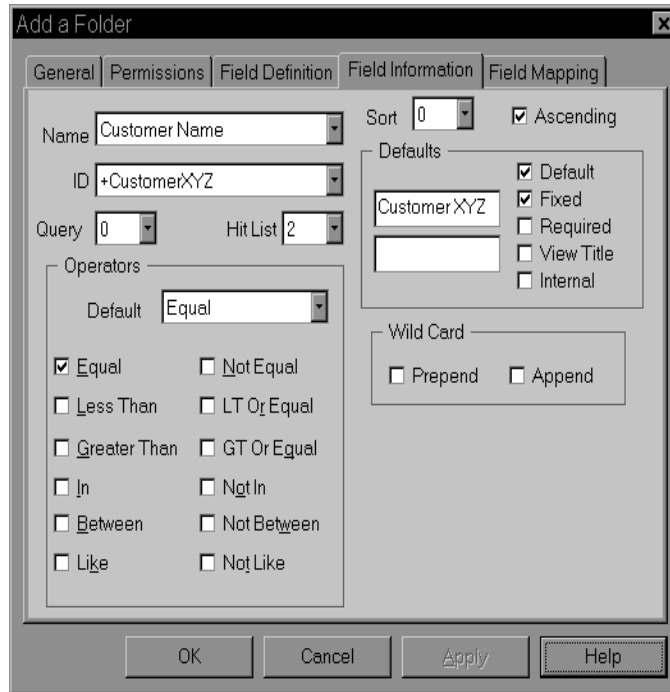


Figure 42. Field Information Page

22. Select the Field Mapping tab to map the folder fields to application group database fields. OnDemand uses the values that users type in folder fields to construct SQL queries. An SQL query uses the database field name.
23. Map the following folder fields to their corresponding application group fields:
  - Account Number to acct#
  - Customer Name to custname
  - Report Date to rdate

Figure 43 on page 102 shows the completed Field Mapping page.

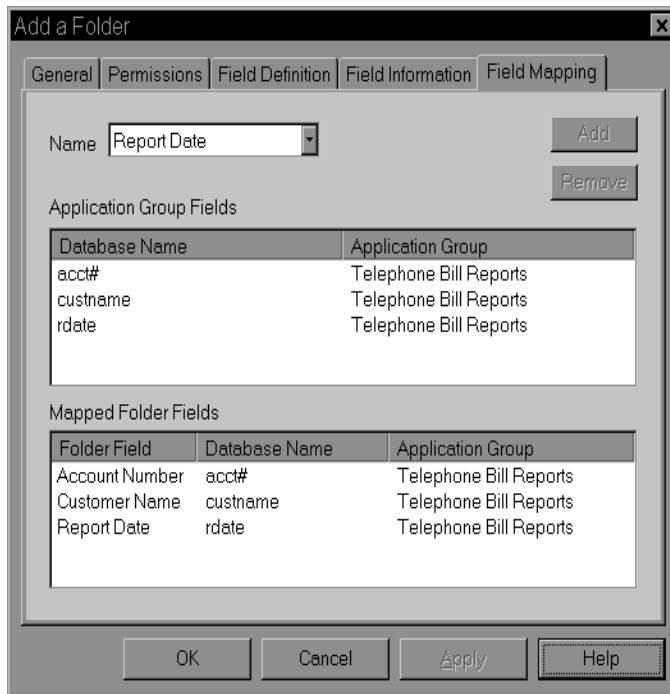


Figure 43. Field Mapping Page

24. At this point, the properties of the folder meet the requirements. Click OK in the Add a Folder window. The administrator adds the folder to the database and returns to the administrator window.

## Summary

We've completed the basic requirements for adding a report to the system. We hope the scenario we described and developed is similar to how you plan to use OnDemand at your company. We tried to add enough variations to show the flexibility of OnDemand to meet a range of business and operational requirements. Of course, there are several things we didn't show you. For example, we didn't create logical views of the report. Nor did we show you how to process the records written to the system logging facility. We also didn't show you every way to complete a given task or implement specific requirements. As with most administrative software, there's more than one way to accomplish something. Hopefully, we showed you the most straightforward way to get things done with the administrator interface.

You can use reference information provided with the product and online help to find out more about how to use OnDemand. If you have questions and can't find the answers, please contact the IBM support center. We also offer classes that further explore how to administer the system. Finally, you can let

us know how well we presented the information in this book and if you found the book helpful. You can use the reader's comment form at the back of the book to let us know.



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## Part 4. Reference



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## Chapter 16. Add a User dialog box

The Add a User dialog box contains fields for you to enter the attributes of the user and places for you to add the user to groups, application groups, and folders. The Add a User dialog box is organized into five pages: General, User Information, Application Group Permissions, and Folder Permissions.

---

### General page

Table 4. General Page

Field	REQ/OPT	Default Value
User ID	REQ	
UID	REQ	Assigned by OnDemand
Password	OPT	
Verify Password	OPT	
Description	OPT	
User Type	REQ	User

#### User ID

- The User ID can be a maximum of 20 characters.
- The User ID cannot include the ' (apostrophe), \* (asterisk), % (percent), + (plus), \_ (underscore), [ (left bracket), ] (right bracket), " (double quote), or blank character.
- You can type a userid in mixed case. By default, OnDemand ignores the case (LaGuarde is the same as laguarde). OnDemand converts lowercase letters in a user name to uppercase (LaGuarde is stored as LAGUARDE). However, depending on how you set the Login Processing system parameters, userid processing may be different (the case of the userid may be significant). "Chapter 4. System parameters" on page 11 provides details.
- The User ID must be unique on the library server.

#### UID

OnDemand generates a UID and places the number in the UID field.

If you choose to assign your own UID values, type a number between 1 and 80000. OnDemand authenticates the UID to ensure that it does not already exist in the database.

## Password

You can assign an initial password for the user.

The password can be a maximum of 20 characters, typed in upper, lower, or mixed case characters. However, depending on how you set the Login Processing system parameters, the case of the password may be significant. “Chapter 4. System parameters” on page 11 provides details.

If you do not complete the Password field, it means that the user does not initially require a password to log on to the library server. However, OnDemand checks the Minimum Password Length when the password for a User ID is set or changed. If the new password does not contain the minimum number of characters, OnDemand issues an error message. “Chapter 4. System parameters” on page 11 provides details about how to set the minimum password length.

The user can change the password after logging on to the library server with an OnDemand client program or the administrator interface. If the user forgets the password, a system administrator or user administrator can set a new password without entering the old password.

## Verify Password

Confirm the password by typing it in the Verify Password field. Depending on how you set the Login Processing system parameters, the case of the password may have to match exactly. “Chapter 4. System parameters” on page 11 provides details.

## Description

Optionally enter up to 120 characters of descriptive information about the user in the Description field.

## User Type

OnDemand supports four types of users. Choose from the following:

- **User.** A user can log on to OnDemand, open folders the user is authorized to access, and query and retrieve data from application groups the user is authorized to access. Select the Create Application Groups check box to let the user create application groups and applications. Select the Create Folders check box to let the user create folders.
- **User Administrator.** A user administrator can perform the basic user functions and can add, update, and delete users. A user administrator cannot perform application group/folder or system administrator functions.



A user administrator cannot set or change the user type to application group/folder or system administrator. A user administrator cannot delete an application group/folder administrator or a system administrator.

- **Application Group/Folder Administrator.** An application group/folder administrator can perform the basic user functions and can add, update, and delete application groups, applications, and folders. An application group/folder administrator cannot perform user administrator or system administrator functions.
- **System Administrator.** A system administrator can perform the basic user functions and can add application groups, applications, folders, printers, storage sets, users, and groups. A system administrator can update and delete any user, group, application group, application, folder, storage set, or printer defined to OnDemand.

The logon user must be a user administrator or system administrator to change the user type. The logon user must be a system administrator to change the user type to application group/folder or system administrator.

---

## User Information page

OnDemand programs can use the information that you provide on the User Information page. For example, OnDemand client programs can use the information to place the user's name, address, and department on a FAX cover page or printer separator page. You can assign a default server printer and specify a FAX cover page for the user.

Optionally enter information in and make selections for the following fields:

- **Name.** The user's name. You can enter up to 60 characters.
- **Company.** The name of the company. You can enter up to 60 characters.
- **Title.** The user's title or job responsibility. You can enter up to 60 characters.
- **Address.** The address of the company or the user's location. OnDemand provides four address lines, each up to 60 characters in length. The OnDemand CICS/ESA client program places the information in the first address line on the printer separator page.
- **Dept.** The user's department name or number. You can enter up to 60 characters.
- **Room.** The user's room name or number. You can enter up to 60 characters.
- **Building.** The user's building name or number. You can enter up to 60 characters.
- **Account Info.** Accounting information. You can type up to 60 characters. OnDemand includes the information in messages generated by the actions performed by the user. OnDemand writes the messages to the system log and passes the messages to the system log user exit.

- Phone #. The user's phone number. You can enter up to 32 characters.
- FAX #. The phone number of the user's FAX machine. You can enter up to 32 characters.
- Cover Page. The default FAX cover page. This field should be left blank unless a cover page has been designed and tested by a system administrator. The user can change the FAX cover page information after choosing the server print command.
- Default Server Printer. Determines the printer name that appears in the server printer field when the user chooses the server print command from an OnDemand client program. This is the device where, by default, OnDemand sends printed output. Select a device name from the list. Select \*NONE, if you do not want to identify a default server printer for the user. The user can change the printer destination after choosing the server print command.

---

## Adding a user to a group

You can add a user to one or more groups. You typically add users to groups and maintain application group and folder permissions at the group level to ease the administration of the system. When you want to provide a group of users access to a new folder, simply add the group to the folder and set the access permission. Complete the following steps to add a user to a group.

1. In the Add a User dialog box, click the Groups tab.
2. In the Groups list, select the name of the group.
3. Click Add. The administrator moves the group to the Selected list.  
To remove the user from a group, select the group in the Selected list and click Remove.

---

## Application Group Permissions page

You can add the user to one or more application groups. When you add the user to an application group, you determine the types of application group functions that the user can perform. For example, if you add the user to an application group and set the access permission, the user can query data stored in the application group. You can limit the user's access to data stored in an application group by entering a valid SQL query string, containing keywords, operators, and data values.

When you add a user to an application group, the permissions you set take precedence over any permissions set at the application group level and the permissions of any groups the user may belong to.

## Authority

The application group authority determines the type of application group functions that the user can perform. Choose from Access, Logical Views, and Administrator.

- **Access.** Lets the user search for and retrieve data stored in the application group.  
When you select the Access check box, OnDemand automatically selects the View, Print, FAX, and Copy check boxes in the Document area and the View and Add check boxes in the Annotation area.
- **Logical Views.** Lets the user access data stored in the application group and create private logical views with OnDemand client programs.  
When you select the Logical Views check box, OnDemand automatically selects the Access Authority, the View, Print, FAX, and Copy check boxes in the Document area, and the View and Add check boxes in the Annotation area.
- **Administrator.** Lets the user access data stored in the application group with OnDemand client programs, maintain the application group with the administrator interface, and load data into the application group. The user can add, modify, and delete public logical views, view annotations stored in the application group, and update and delete the application group.  
When you select the Administrator check box, OnDemand automatically selects the Access and Logical Views check boxes, the View, Add, Print, FAX, and Copy check boxes in the Document area, and the View, Add, and Copy check boxes in the Annotation area.

## Document and Annotation

Table 5 lists the document and annotation permissions.

Table 5. Document and Annotation Permissions for Users

Permission	Document Function	Annotation Function
View	Lets the user view documents with OnDemand client programs.	Lets the user view annotations to documents.
Add	Lets the user load data into the application group with OnDemand data loading programs.	Lets the user add annotations to documents with OnDemand client programs.
Delete	Lets the user remove data from the application group with OnDemand utility programs.	Lets the user delete annotations with OnDemand client programs.
Update	Lets the user audit documents.	Lets the user update annotations.

Table 5. Document and Annotation Permissions for Users (continued)

Permission	Document Function	Annotation Function
Print	Lets the user send a copy of a document to a print device.	N/A
FAX	Lets the user send a copy of a document to a FAX or print device. The OnDemand client program generates a cover page and sends it to the output device along with a copy of the document.	N/A
Copy	Lets the user copy selected text or one or more pages of text from a document, a selected area of a document as a bitmap, and lines or fields from the document list to the clipboard.	Lets the user copy annotations to the clipboard.

### Document permissions

Document permissions determine the actions the user can perform. When you select the Access check box, OnDemand selects the View, Print, FAX, and Copy check boxes in the Document area.

The print and FAX actions use the same system services. Accordingly, when you select the Print check box, OnDemand automatically selects the FAX check box (and vice versa).

When you select a check box in the Document area, OnDemand automatically selects the Access check box, if it is not already selected.

### Annotation permissions

Annotation permissions determine the actions the user can perform. When you select the Access check box, OnDemand selects the View and Add check boxes in the Annotation area.

The print and FAX actions are not currently supported.

When you select a check box in the Annotation area, OnDemand automatically selects the Access check box, if it is not already selected.

### Query Restriction

You can use the Query Restriction field to limit access to application group data. The Query Restriction field provides support for item-level security using data values for specific fields in the application group.

Specify a query restriction by entering a valid SQL statement in the Query Restriction field. For example, assume you want to limit the user's access to only those account numbers less than 50000. Without a query restriction, when the user enters a search for account numbers equal to or greater than 10000, OnDemand dutifully compiles a hit list of account numbers in the database that are greater than 10000, including 50000, 50001, and so forth. You can limit access to the data by entering an SQL statement similar to the following in the Query Restriction field:

```
ACCT_NO < '50000'
```

In the example, ACCT\_NO is a string field.

For more information about SQL concepts, queries, and statements, please refer to the SQL reference provided with the database manager product you installed on the library server.

---

## Folder Permissions page

You can add the user to one or more folders. When you add the user to a folder, you determine the types of functions that the user can perform. For example, if you add a user to a folder and set the access permission, the user can open the folder.

When you add a user to a folder, the permissions you set take precedence over any permissions set at the folder level and the permissions of any groups the user may belong to.

### Authority

Authority determines the type of folder functions that the user can perform. Choose from Access and Administrator.

- Access. Lets the user open the folder with OnDemand client programs.
- Administrator. Lets the user open the folder with OnDemand client programs and maintain the folder with the administrator interface, including adding other users and groups to the folder.

### Named Queries

Named Queries determines whether the user can create, delete, modify, or view named queries.

A named query is a set of search criteria for the folder that can be saved by name, selected, and restored into folder search fields at a later time.

OnDemand provides two types of named queries:

- Public. A named query that is available to anyone with authority to open the folder.
- Private. A named query that is available to the OnDemand user that saved the query. A system administrator or application group/folder administrator can also access private named queries.

Choose from Public, Private, and View.

- Public. The user can add, update, and delete the named queries that are generally available to any user that can open the folder.
- Private. The user can add, update, and delete private (non-shared) named queries.
- View. The user can select and restore public named queries to folder search fields, but cannot add, update, or delete public named queries. The view Named Queries permission also lets users view their own, private named queries, but not add, update, or delete private named queries.

### **Maximum Hits**

Maximum Hits determines the number of items that OnDemand displays in the document list, regardless of the number of items that match a query. OnDemand lists items in the order that they were loaded into the database.

The default value, -1 (minus one), means that OnDemand lists all of the items that match a query. The CICS/ESA client lists a maximum of 200 items in the document list.

---

## Chapter 17. Add a Group dialog box

The Add a Group dialog box contains fields for you to enter the attributes of the group and places for you to add users to the group and add the group to application groups and folders. The information in the Add a Group dialog box is organized into three pages: General, Application Permissions, and Folder Permissions.

---

### General page

Table 6. General Page

Field	REQ/OPT	Default Value
Group Name	REQ	
GID	REQ	Assigned by OnDemand
Group Owner	OPT	*NONE
Description	OPT	

#### Name

- The group name can be a maximum of 20 characters.
- The group name cannot include the ' (apostrophe), \* (asterisk), % (percent), + (plus), \_ (underscore), [ left bracket, ] (right bracket), " (double quote), or blank character.
- A group name can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).
- The group name must be unique in OnDemand.

#### GID

OnDemand generates a GID and places the number in the GID field.

If you choose to assign your own GID values, type a number greater than 80000. OnDemand authenticates GID values to ensure that they are not duplicated.

#### Group Owner

The group owner can add users to and remove users from the group. To maintain a group's application group and folder permissions, the group owner must have administrator authority for the application groups and folders or be an application group/folder administrator or a system

administrator. If you do not assign a group owner, only a system administrator user can make changes to the group.

To assign a group owner, expand the Group Owner list and select the user name. The default value, \*NONE, means that there is no group owner.

**Note:** The user that you select does not obtain permissions from the group unless you add the user to the group. However, a group owner can add their userid to the group at any time.

## Group Description

You can enter up to 120 characters of descriptive information about the group in the Description field. This field can contain information such as the purpose of the group and the name and phone number of the group owner.

---

## Application Group Permissions page

You can add the group to one or more application groups. When you add the group to an application group, you determine the types of application group functions that users assigned to the group can perform. For example, if you select an application group and set the access permission, any user assigned to the group can query data stored in the application group. You can limit the group's access to data stored in an application group by entering a valid SQL query string, containing keywords, operators, and data values.

## Authority

The application group authority determines the type of application group functions that users assigned to the group can perform. Choose from Access, Logical Views, and Administrator.

- **Access.** Lets users assigned to the group search for and retrieve data stored in the application group.  
When you select the Access check box, OnDemand automatically selects the View, Print, FAX, and Copy check boxes in the Document area and the View and Add check boxes in the Annotation area.
- **Logical Views.** Lets users assigned to the group access data stored in the application group and create private logical views with OnDemand client programs.  
When you select the Logical Views check box, OnDemand automatically selects the Access Authority, the View, Print, FAX, and Copy check boxes in the Document area, and the View and Add check boxes in the Annotation area.
- **Administrator.** Lets users assigned to the group access data stored in the application group with OnDemand client programs, maintain the



application group with the administrator interface, and load data into the application group. Users assigned to the group can add, modify, and delete public logical views, view annotations stored in the application group, and update and delete the application group.

When you select the Administrator check box, OnDemand automatically selects the Access and Logical Views check boxes, the View, Add, Print, FAX, and Copy check boxes in the Document area, and the View, Add, and Copy check boxes in the Annotation area.

## Document and Annotation

Table 7 lists the document and annotation permissions.

Table 7. Document and Annotation Permissions for Groups

Permission	Document Function	Annotation Function
View	Lets the group view documents with OnDemand client programs.	Lets the group view annotations to documents.
Add	Lets the group load data into the application group with OnDemand data loading programs.	Lets the group add annotations to documents with OnDemand client programs.
Delete	Lets the group remove data from the application group with OnDemand utility programs.	Lets the group delete annotations with OnDemand client programs.
Update	Lets the group audit documents.	Lets the group update annotations.
Print	Lets the group send a copy of a document to a print device.	N/A
FAX	Lets the group send a copy of a document to a FAX or print device. The OnDemand client program generates a cover page and sends it to the output device along with a copy of the document.	N/A
Copy	Lets the group copy selected text or one or more pages of text from a document, a selected area of a document as a bitmap, and lines or fields from the document list to the clipboard.	Lets the group copy annotations to the clipboard.

## Document permissions

Document permissions determine the actions users assigned to the group can perform. When you select the Access check box, OnDemand selects the View, Print, FAX, and Copy check boxes in the Document area.

The print and FAX actions use the same system services. Accordingly, when you select the Print check box, OnDemand automatically selects the FAX check box (and vice versa).

When you select a check box in the Document area, OnDemand automatically selects the Access check box, if it is not already selected.

## Annotation permissions

Annotation permissions determine the actions users assigned to the group can perform. When you select the Access check box, OnDemand selects the View and Add check boxes in the Annotation area.

The print and FAX actions are not currently supported.

When you select a check box in the Annotation area, OnDemand automatically selects the Access check box, if it is not already selected.

## Query Restriction

You can use the Query Restriction field to limit access to application group data. The Query Restriction field provides support for item-level security using data values for specific fields in the application group.

Specify a query restriction by entering a valid SQL statement in the Query Restriction field. For example, assume you want to limit the access of a group of users to data stored in the application group where the value in the account number field is less than 50000. Without a query restriction, when the users enter a search for account numbers equal to or greater than 10000, OnDemand dutifully compiles a hit list of account numbers in the database that are greater than 10000, including 50000, 50001, and so forth. You can limit access to the data by entering an SQL statement similar to the following in the Query Restriction field:

```
ACCT_NO < '50000'
```

In the example, ACCT\_NO is a string field.

For more information about SQL concepts, queries, and statements, please refer to the SQL reference provided with the database manager product you installed on the library server.

---

## Folder Permissions page

You can add the group to one or more folders. When you add the group to a folder, you determine the types of functions that users assigned to the group can perform. For example, if you select a folder and set the access permission, any user assigned to the group can open the folder.

### Authority

Authority determines the type of folder functions that users assigned to the group can perform. Choose from Access and Administrator.

- **Access.** Lets users assigned to the group open the folder with OnDemand client programs.
- **Administrator.** Lets users assigned to the group open the folder with OnDemand client programs and maintain the folder with the administrator interface, including adding other users and groups to the folder.

### Named Queries

Named Queries determines whether users assigned to the group can create, delete, modify, or view named queries.

A named query is a set of search criteria for the folder that can be saved by name, selected, and restored into folder search fields at a later time.

OnDemand provides two types of named queries:

- **Public.** A named query that is available to anyone with authority to open the folder and view named queries.
- **Private.** A named query that is available to the OnDemand user that saved the query. A system administrator or application group/folder administrator can also access private named queries.

Choose from Public, Private, and View.

- **Public.** Users assigned to the group can add, update, and delete the named queries that are generally available to any user that can open the folder and view named queries.
- **Private.** Users assigned to the group can add, update, and delete private (non-shared) named queries.
- **View.** Users assigned to the group can select and restore public named queries to folder search fields, but cannot add, update, or delete public named queries. The view Named Queries permission also lets users view their own, private named queries, but not add, update, or delete private named queries.

## Maximum Hits

Maximum Hits determines the number of items that OnDemand displays in the document list, regardless of the number of items that match a query. OnDemand lists items in the order that they were loaded into the database.

The default value, -1 (minus one), means that OnDemand lists all of the items that match a query. The CICS/ESA client lists a maximum of 200 items in the document list.

---

## Chapter 18. Server printer reference

The Add a Printer dialog box contains fields for you to enter the attributes of the server printer.

Table 8. Fields in Add a Printer

Field	REQ/OPT	Default Value
Name	REQ	
Description	OPT	
Server Queue Name	REQ	
Printer Type	REQ	Printer

---

### Name

- The server printer name can be a maximum of 60 characters in length and can include imbedded blanks.
- The name cannot include the following characters: ' (apostrophe), % (percent), \_ (underscore), [ (left bracket), ] (right bracket), and " (double quote).
- A server printer name can be mixed case. However, the case does not create a unique name (Printer1 is the same as printer1).
- The server printer name must be unique to the library server.

---

### Description

You can enter up to 120 characters of descriptive information about the server printer. For example, you can enter information about the physical print device, such as the model of print device and the location, name, and phone number of the administrator or owner of the print device.

---

### Server Queue Name

The name of the AIX queue where OnDemand sends the print data stream. The name can be a maximum of 16 (sixteen) characters in length and must identify a valid AIX queue name.

---

### Printer Type

The type of print device. Choose from Printer or FAX.



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## Chapter 19. Storage set reference

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### Add a Storage Set dialog box

The Add a Storage Set dialog box contains fields for you to enter the attributes of the storage set and the Storage Nodes area, where you maintain storage nodes.

Table 9. Fields in Add a Storage Set

Field	REQ/OPT	Default Value
Name	REQ	
Description	OPT	
Load Type	REQ	Fixed

#### Name

- The storage set name can be a maximum of 60 characters in length and can include imbedded blanks.
- The name cannot include the following characters: ' (apostrophe), % (percent), \_ (underscore), [ (left bracket), ] (right bracket), and " (double quote).
- A storage set name can be mixed case. However, the case does not create a unique name (SSet1 is the same as sset1).
- The storage set name must be unique in OnDemand.

#### Description

You can type up to 120 characters of descriptive information about the storage set in the Description field. For example, you can enter the purpose of the storage set and the name of the storage set administrator.

#### Load Type

Determines whether OnDemand can load data into more than one primary storage node. Choose from Fixed and Local.

- Fixed. OnDemand loads data into one primary storage node. Identify the primary storage node by selecting the Load Data check box.

When you set the Load Type to Fixed, select the Load Data check box for one primary storage node. A storage set can contain one or more primary storage nodes that reside on one or more object servers. However, when Load Type is Fixed, OnDemand loads data in only one primary storage node, regardless of the number of primary storage nodes you define.

- **Local.** OnDemand can load data into one primary storage node on each object server. To take advantage of this load type, you must configure multiple object servers on your system and you must define at least one primary storage node on each object server. In addition, you must run the data loading program on the object servers where the primary storage nodes reside.

When you set the Load Type to Local, select the Load Data check box for one primary storage node on each object server. A storage set can contain one or more primary storage nodes that reside on one or more object servers.

---

## Defining storage nodes

A storage set can contain one or more primary and secondary storage nodes. A storage node identifies an object server where OnDemand stores data. A primary storage node is where OnDemand stores report files and resources loaded into an application group. A secondary storage node is where OnDemand can store a copy of files stored in a primary storage node.

If you need to maintain a copy of files stored in a primary storage node, you must either add the primary storage node to a secondary storage node or implement a copy storage pool in ADSM. We strongly encourage you to implement a copy storage pool in ADSM. However, the primary storage node and the copy storage pool must reside on the same object server. The *Administrator's Reference* provides details about how to implement a copy storage pool in ADSM.

### Primary Node dialog box

The Add a Primary Node dialog box contains fields for you to enter the attributes of the primary storage node.

Table 10. Fields in Add a Primary Node

Field	REQ/OPT	Default Value
Object Server	REQ	*ONDEMAND
Storage Node	REQ	
Description	OPT	
Logon	OPT	
Password	OPT	
Verify Password	OPT	
Load Data	OPT	No
Cache Only	OPT	No



## Object Server

The TCP/IP host name alias, fully-qualified host name, or IP address of the object server where the primary storage node resides.

Select a name from the list or enter the name of an OnDemand server in the field. Select \*ONDEMAND, if the storage node resides on the same workstation as the OnDemand library server.

## Storage Node

The Storage Node field contains the name of the primary storage node.

- The name can be a maximum of 60 characters in length and can include imbedded blanks.
- The name can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).
- The name must be unique to the object server.

## Description

You can enter up to 120 characters of descriptive information about the storage node in the Description field. For example, you can enter the purpose of the primary storage node and the name of the primary storage node administrator.

## Logon

The Logon field contains the storage manager node name.

If you use ADSM to provide storage management for OnDemand, the name must be the same as the node name in ADSM.

When you define a cache-only storage node, do not enter a value in the Logon field.

## Password

The Password field contains the storage manager node password.

If you use ADSM to provide storage management for OnDemand, the password must be the same as the node password in ADSM. A node password in ADSM can be from eight to sixteen characters in length.

When you define a cache-only storage node, do not enter a value in the Password field.

## Verify Password

Verify the Password by typing it in the Verify Password field.

When you define a cache-only storage node, do not enter a value in the Verify Password field.

## Load Data

OnDemand loads data into the primary storage node or nodes that have the Load Data check box selected.

- If the Load Type is Fixed, choose the primary storage node where you want OnDemand to load data and select the Load Data check box.

A storage set can contain one or more primary storage nodes that reside on one or more object servers. When the Load Type is Fixed, OnDemand loads data into only one primary storage node at a time.

- If the Load Type is Local, choose one primary storage node on each object server and select the Load Data check box.

A storage set can contain one or more primary storage nodes that reside on one or more object servers. When the Load Type is Local, OnDemand can load data into one primary storage node per object server. When you set the Load Type to Local, you must select the Load Data check box for one primary storage node on each object server.

When you add a storage library to the system and you want OnDemand to begin storing data in the new library, you must define the library to ADSM, define a primary storage node for the library, and select the Load Data check box so that OnDemand can begin loading data into the library.

## Cache Only

Determines whether OnDemand copies data to archive media. If you select the Cache Only check box, you define a cache-only primary storage node. OnDemand maintains data written to the node on magnetic storage, not archive media.

When you select Cache Only, you cannot add the primary node to a secondary node.

When you define a cache-only storage node, do not enter a value in the Logon, Password, or Verify Password fields.

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## Chapter 20. Add an Application Group dialog box

The Add an Application Group dialog box contains fields for you to enter the attributes of the application group. The pages of the Add an Application Group dialog box organize information about the application group. The tabs show which page you are on: General, Message Logging, Storage Management, Permissions, Field Definition, and Field Information.

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### General page

Table 11. General Page

Field	REQ/OPT	Default Value
Name	REQ	
Description	OPT	
Create Tablespace Type	REQ	SMS
Maximum Rows	REQ	2500000
Loads per Database Table	REQ	Multiple Loads per Database Table
Data Management	REQ	OnDemand
External Cache	OPT	No
Annotation	REQ	No

#### Name

- An application group name can be a maximum of 60 characters, including embedded blanks.
- The name cannot include the following characters: ' (apostrophe), % (percent), \_ (underscore), [ (left bracket), ] (right bracket), and " (double quote).
- An application group name can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).
- The application group name must be unique in OnDemand.

#### Description

You can enter up to 120 characters of descriptive information about the application group in the Description field. For example, you can enter the purpose of the application group and the name of the application group administrator.

## Create Tablespace Type

**Note:** Depending on the database manager product that you installed on the library server, the term *table space* may be an unfamiliar concept.

However, if the database manager product supports the idea of a table space and table space management concepts, OnDemand can map the DMS and SMS table space types to objects supported by the database manager.

- DMS (Database Managed Space). The database manager controls the table space. OnDemand allocates all of the disk space required for a DMS table space at the time that you create the application group. The size of a DMS table space is a factor of the maximum rows and the size of a row. We recommend using DMS table spaces only if your organization adds few application groups to the system.
- SMS (System Managed Space). The file system manager controls the storage space. Space is allocated for an SMS table space when it is required. The file system manager increases the size of a SMS table space, as required, during a load process. The file system manager allocates space in the SMS table space filesystem with the most free space. We recommend that you use SMS table spaces.
- None. OnDemand stores all application group index data in the default (user) table space.

## Maximum Rows

- If you select Multiple loads per database table, OnDemand uses the number to determine when to segment application group index data. When a table of application group index data contains the number of rows specified in the Maximum Rows field, OnDemand closes the table and initializes a new table. The closed table supports queries. OnDemand adds index records created during new loads to the new table.

The default value, 2500000, balances query and data loading performance. If the application group contains a small amount of data, you can enter a smaller number, which typically provides better query performance without affecting data loading time. If you plan to archive a very large amount of data in the application group and all of the index data must reside in the same table, you can enter a larger number. However, you may experience longer data loading times when a table of application group data exceeds 2.5 million rows.

We recommend that you use the default value of 2.5 million rows.

- If you select Single load per database table, OnDemand uses the number to determine the amount of table space to allocate for each report file load. OnDemand allocates the same amount of table space for each report file load, regardless of the number of rows added to the database. For example, assume the average number of indexed items in a report file load is 20,000.

However, one report file load per month contains 50,000 indexed items. If you select the single load per database table database organization, you must set the maximum rows per database table to 50,000, so that OnDemand allocates enough space for the largest report file load.

### Loads per Database Table

- **Multiple Loads per Database Table.** Each time you load a report into the application group, OnDemand adds index records to a database table. When a database table reaches the maximum rows value, OnDemand closes the existing table and creates a new table.

This database organization allows users to locate an item without knowing the exact report that contains the item. OnDemand automatically searches one or more tables of application group data to satisfy a query.

OnDemand can expire index data by dropping an entire table of data at a time (recommended) or by deleting one or more rows at a time. Before OnDemand can expire a table of index data, the table must be closed (it contains the number of rows specified in the Maximum Rows field) and every record in the table must have reached its expiration date.

- **Single Load per Database Table.** Each time you load a report file into the application group, OnDemand creates a new database table.

This database organization allows end-users to find information in a specific instance of a report file load. OnDemand searches one table of application group data to satisfy an end-user query.

If you choose this database organization, you should set the Expiration Type to segment. Since each table in the application group contains index data for one report file load, OnDemand can expire index data from the application group quickly and efficiently, by dropping a table of data at a time.

We recommend that you always use the default, Multiple loads per database table.

Regardless of the database organization that you select, you can define a segment field for the application group to provide better management of index data. For example, OnDemand can limit a query to a specific table and delete a table of data at a time from the application group. The segment field must contain the date from the report file or the date that the report file was loaded into the application group. We strongly encourage you to define a segment field for all your application groups, especially those that can grow to contain enormous amounts of data.

## Data management

- OnDemand. OnDemand manages data stored in the application group. OnDemand stores index data in database tables, manages files in cache storage, and optionally, works with ADSM to maintain copies of files on archive media.
- Client User Exit Defined. The data stored in the application group is managed independently of OnDemand. That is, user-provided products maintain data stored in the application group, rather than the database and storage manager software built into OnDemand. For example, you can use OnDemand client programs to query files stored in a production imaging system, such as IBM VisualInfo.

When you choose this option, you must provide your own user exit program to interact with the OnDemand data management interface and the products that manage the data. If you have questions about the OnDemand data management interface, please contact the IBM support center.

Even though the application group data is maintained outside OnDemand, you must still provide basic application group information in the General category, application group, document, and annotation authorities in the Permissions category, and field information in the Field Definition and Field Information categories.

When you choose this option, OnDemand ignores any information that you provide about the database, such as the database organization and the annotation flag, messages (the options in the Message Logging category appear shaded, that is, unavailable for update), and the storage manager (the options in the Storage Management category appear shaded, that is, unavailable for update).

After you add the application group, you cannot change the Data Management selection.

## External Cache

When you use OnDemand to manage data stored in the application group, you can enable an external cache. An external cache allows you to store index data in the database, but not load the report data (indexed groups and resources) into the application group. The report data remains on storage outside the control of, but accessible to OnDemand. To retrieve the report data from within OnDemand, you must supply a user exit program. For example, you can use OnDemand client programs to query files stored in a production check imaging system, such as IBM Payment Solutions.

## Annotation Flag

- Yes. OnDemand sets the annotation flag in the database when a user adds an annotation to an item. When an annotation exists for an item, the client programs display a note icon next to the item in the document list.
- No. The folder note search setting determines when the client program notifies a user about annotations to an item.

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## Message Logging page

You must select the Application Group Messages check box on the System Parameters dialog box to enable OnDemand to record application group messages.

If you select Client User Exit Defined on the General page, message logging through OnDemand is not permitted.

Table 12. Message Logging Page

Field	REQ/OPT	Default Value
Document	OPT	Retrieval, Server Printing
Object	OPT	
Annotation	OPT	

### Document

Determines the types of document events that OnDemand records in the system logging facility.

- Retrieval (Bulk). OnDemand records a message in the system log each time the bulk retrieval method is used to retrieve items from the system.
- Retrieval. OnDemand records a message in the system log each time an item is retrieved from the system.
- Database Queries. OnDemand records a message in the system log each time the database is queried.
- Server Printing. OnDemand records a message in the system log each time the server print command is used to print an item.
- Index Update. OnDemand records a message in the system log each time a user updates an item.
- Index Delete. OnDemand records a message in the system log each time a user deletes an item.

### Annotation

Determines the types of annotation events that OnDemand records in the system logging facility.

- Add. OnDemand records a message in the system log each time a user creates an annotation.
- Delete. OnDemand records a message in the system log each time a user deletes an annotation.
- Update. OnDemand records a message in the system log each time a user makes changes to an annotation.

## Object

Determines the types of storage object events that OnDemand records in the system logging facility.

- Store. OnDemand records a message in the system log when a storage object is loaded into the application group.
- Retrieve. OnDemand records a message in the system log when a storage object is retrieved from the application group.

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## Storage Management page

If you select Client User Exit Defined on the General page, storage management through OnDemand is not permitted.

Table 13. Storage Management Page

Field	REQ/OPT	Default Value
Storage Set Name	REQ	
Object Size (K)	REQ	10000
Length of Time to Cache Data on Magnetic	REQ	90
Length of Time before copying Cache to Archive Media	OPT	-1
Length of Time before migrating Indexes	REQ	0
Length of Time to keep imported migrated Indexes	Opt	0
Life of Data and Indexes	REQ	2555
Expiration Type	REQ	Segment

## Storage Set Name

You must assign the application group to a storage set. After you add the application group, you cannot assign the application group to a different storage set.



The storage set is where the storage manager maintains copies of report files and resources loaded into the application group. Depending on the requirements of the application group, the storage manager can maintain data in cache storage, on archive media, and both in cache storage and on archive media.

- Select a storage set that supports the Life of Data and Indexes specification for the application group. The retention period of the index data and report files maintained by the storage manager must match the life of data and indexes in OnDemand.
- Select a storage set that supports the media type required by the application group. For example, if you need to maintain report files in cache storage volumes for 90 days and on archive media for seven years, you must select a storage set that writes files to both cache storage and archive media.
- If you need to maintain more than one archive copy of files on different object servers, select a storage set that copies files to a secondary storage node.
- If you select a cache-only storage set, the Length of Time before copying Cache to Archive Media appears shaded (unavailable for input). A cache-only storage set does not copy files to archive media.
- If you select a cache-only storage set and later want to store files on archive media, you must either change the primary storage node to write files to archive media or assign the primary storage node to a secondary storage node that write files to archive media. However, OnDemand does not copy files previously loaded into the application group from cache storage to archive media.
- If you need to maintain data in cache storage and not on archive media, select the appropriate storage set and set the Length of Time to Cache Data on Magnetic to a value greater than zero.
- If you need to store data on archive media and not in cache storage, select the appropriate storage set and set both the Length of Time to Cache Data on Magnetic and the Length of Time before copying Cache to Archive Media to -1 (minus one).

### **Object Size(K)**

The size of a storage object. The default value, 10000, means that OnDemand segments and compresses report data into 10 MB storage objects. We recommend that you accept the default value.

You can change the size of a storage object by replacing the contents of the field with a number between 1 and 99999. That is, a value between 1 KB and approximately 100 MB. However, use caution when changing the default value. Specifying too large or too small a value can have an adverse impact on data loading performance. OnDemand requires approximately one minute to load 10 MB of data to an optical storage volume.

The size of compressed storage objects, defined in the application, must be less than or equal to the size of the storage object. OnDemand issues an error message if the object size is smaller than the compressed object size of any application assigned to the application group.

### **Length of Time to Cache Data on Magnetic**

Determines whether OnDemand stores report files and resources in cache storage, and if so, the length of time that OnDemand maintains files in cache storage. This value also determines whether OnDemand searches cache storage when users retrieve items from the application group. Specify the length of time in days. The default value is 90 days. The maximum value you can enter is 99999 (273 years).

When you maintain files in cache storage and on archive media, the files must reside in cache storage long enough to migrate them to archive media. That is, the number of days the files reside in cache storage must be equal to or exceed the number of days to wait before migrating them to archive media. If you define a segment field for the application group, OnDemand uses the date in the segment field to determine when to migrate the files. Otherwise, OnDemand uses the date that the files were loaded into the application group to determine when to migrate the files.

- If you need to store reports in cache storage and not on archive media, select the appropriate storage set and set the Length of Time to Cache Data on Magnetic to a value greater than zero.
- If you need to store reports on archive media and not in cache storage, select the appropriate storage set and set the Length of Time to Cache Data on Magnetic to -1 (minus one). You must also set the Length of Time before copying Cache to Archive Media to -1 (minus one).
- If you specify a value of 1 (one) or more (days), OnDemand stores files in cache storage and searches cache storage when users retrieve items for viewing and printing.
- A value of 0 (zero) means that OnDemand does not store files in cache storage but does search cache storage when users retrieve items.

You can prevent OnDemand from storing files in cache storage by updating the application group and setting the Length of Time to Cache Data on Magnetic to 0 (zero). After setting the value to 0 (zero), OnDemand no longer stores files in cache storage, but does search cache storage when end-users retrieve items.

However, if you set the value to zero, you must set the Length of Time before copying Cache to Archive Media to -1 (minus one). You cannot specify a zero for both the Length of Time to Cache Data on Magnetic and the Length of Time before copying Cache to Archive Media.

- A value of -1 (minus one) means that OnDemand does not store files in cache storage and does not search cache storage when users retrieve items for viewing and printing.

### **Length of Time before copying Cache to Archive Media**

Determines when OnDemand stores report and resource group files on archive media.

When you maintain files both in cache storage and on archive media, the files must reside in cache storage long enough to migrate them to archive media. That is, the number of days the files reside in cache storage must be equal to or exceed the number of days to wait before migrating them to archive media.

The default value is -1 (minus one), which means that OnDemand stores files on archive media when they are initially loaded into the application group.

You must specify a value of -1 (minus one) if you set the Length of Time to Cache Data on Magnetic to 0 (zero).

If you select a cache-only storage set, the Length of Time before copying Cache to Archive Media appears shaded (unavailable for input).

- A value of 0 (zero) means that OnDemand stores files on archive media the next time that the arsmaint command runs. You can set up the arsmaint command to run every day, once a week, or any other schedule that is appropriate for the application group. OnDemand stores the files on archive media based on the schedule that you establish.

You cannot specify a zero for both the Length of Time before copying Cache to Archive Media and the Length of Time to Cache Data on Magnetic.

- A value of 1 (one) or more (days) means that OnDemand stores files on archive media after the files reside in cache storage for that number of days. If you define a segment field for the application group, OnDemand uses the date in the segment field to determine when to migrate files. Otherwise, OnDemand uses the date that the files were loaded into the application group to determine when to migrate files. When the system date minus the segment (or load) date is equal to the value that you specify for the Length of Time before copying Cache to Archive Media, OnDemand stores the files on archive media. The maximum value you can enter is 99999 (273 years).

The *Administrator's Reference* provides details about the arsmaint command, parameters, and options. The Installation Guide describes how to set up the arsmaint command to start automatically on a regular schedule.

## **Length of Time before migrating Indexes**

Determines when OnDemand migrates full tables of index data to archive media. Specify the length of time in number of days. The maximum value you can enter is 99999 (273 years).

Migration is the process by which OnDemand moves index data from the database to archive media. This process optimizes database storage space while allowing you to maintain index data for a very long time. You typically migrate index data after users no longer need to access the reports, but, for legal or other requirements, you still need to maintain the data for some number of years or months. If a user queries index data that has been migrated, an administrator must import a copy of the migrated table or tables with the `arsmaint` command. After maintaining the imported index data in the database for the number of days specified in the Length of Time to keep imported migrated Indexes field, OnDemand deletes the data from the database.

A table of index data for a Multiple Loads per Database Table application group becomes full when it reaches the Maximum Rows value. For a Single Load per Database Table application group, each report file load creates a new database table.

The default value of 0 (zero) means that OnDemand does not migrate index data to archive media.

If you need to maintain index data on archive media, enter the number of days that you want OnDemand to wait before migrating full tables of index data to archive media.

Use caution when you specify a migration value. The value that you specify should exceed the time frame that 99.9 percent of the accesses to the index data occurs. In other words, only in exceptional situations should users need to access data in migrated tables. If a user needs index data that has been migrated to archive media, the process of importing the data into the database requires administrator intervention, and usually results in a significant delay in completing the query. Also, additional space in the database and temporary storage must be available to import index tables.

## **Length of Time to keep imported migrated Indexes**

Determines the number of days before OnDemand deletes imported index data from the database. Specify the length of time in number of days. The maximum value you can enter is 99999 (273 years).

Migration is the process by which OnDemand moves index data from the database to archive media. This process optimizes database storage space while allowing you to maintain index data for a very long time. You typically migrate index data after users no longer need to access the reports, but for legal or other requirements, you still need to maintain the data for some number of years or months. If a user queries index data that has been migrated, an administrator must import a copy of the migrated table or tables with the `arsmaint` command. After maintaining the imported index data in the database for the number of days specified in the Length of Time to keep imported migrated Indexes field, OnDemand deletes the data from the database.

If you need to maintain index data on archive media, first enter the number of days that you want OnDemand to wait before migrating full tables of index data to archive media in the Length of Time before migrating Indexes field. OnDemand sets the Length of Time to keep imported migrated Indexes field to 30 (days). Then, if you want OnDemand to keep imported index data in the database for longer than 30 days, enter the number of days in the Length of Time to keep imported migrated Indexes field.

OnDemand deletes imported index data after it resides in the database for the number of days specified in the Length of Time to keep imported migrated Indexes or the Life of Data and Indexes, whichever occurs first.

### **Life of Data and Indexes**

Determines the length of time that OnDemand maintains report files, resource group files, and index data for the application group. Specify the length of time in number of days. The default value is 2555 (7 years). A value of 0 (zero) means that OnDemand maintains the files and index data indefinitely. The maximum value you can enter is 99999 (273 years).

OnDemand verifies that the Life of Data and Indexes value is greater than or equal to the value specified for the Length of Time to Cache Data on Magnetic.

If you plan to store application group data on archive media, the value that you specify must match the retention period of the ADSM domain where you plan to store the data.

### **Expiration Type**

Determines how OnDemand deletes index and report data from the application group. Choose from Segment, Load, and Document. We recommend that you use the Segment expiration type.

## Segment

OnDemand deletes a segment (table) of index data at a time from the application group. OnDemand drops the table from the database. The storage manager independently deletes report data associated with the table after the data reaches its storage manager expiration date. This is the most efficient and least time consuming type of expiration processing that OnDemand can perform. Segment is the default expiration type.

A segment of application group data can be expired only when the table is closed and every record in the table has reached its expiration date.

- When you choose the Multiple Loads per Database Table database organization, OnDemand uses the Maximum Rows value to determine when to close a table. A table usually contains a range of dates.
- When you choose the Single Load per Database Table database organization, OnDemand creates a table for each report file load. All the rows in a table usually contain the same date.

When the segment field contains only the month and year (MMYY format), OnDemand expires the segment on the first day of the month (MM).

The segment field (report date or load date, if there is no report date) and the Life of Data and Indexes value determines the expiration date. The schedule of the arsmaint command determines when OnDemand removes index data that is eligible to be deleted. The schedule of the arsmaint command and the thresholds that you set for cache storage determine when OnDemand removes data that is eligible to be deleted from cache storage. The storage manager independently deletes data from archive media after the data reaches its storage manager expiration date.

## Load

OnDemand deletes a report file load at a time from the application group. OnDemand deletes one or more rows from the database. When you choose the Single Load per Database Table database organization, OnDemand deletes a table of index data at a time. The storage manager independently deletes report data from archive media after the data reaches its storage manager expiration date.

The highest date value in the report file load and the Life of Data and Indexes value determines the expiration date. The schedule of the arsmaint command determines when OnDemand removes index data that is eligible to be deleted. The schedule of the arsmaint command and the thresholds that you set for cache storage determine when OnDemand removes report data that is eligible

to be deleted from cache storage. The storage manager independently deletes report data from archive media after the data reaches its storage manager expiration date.

## Document

OnDemand deletes individual items from the application group. OnDemand deletes a row from the database. The storage manager independently deletes the item after it reaches its storage expiration date.

To enable document expiration processing, you must select the Expire Date check box for a date or time field in the Field Information category. The Expire Date field and the Life of Data and Indexes value determines the expiration date. The schedule of the arsmaint command determines when OnDemand removes index data that is eligible to be deleted. The schedule of the arsmaint command and the thresholds that you set for cache storage determine when OnDemand removes report data that is eligible to be deleted from cache storage. The storage manager independently deletes report data from archive media after the data reaches its storage manager expiration date.

When the document field contains only the month and year (MMYY format), OnDemand expires data on the first day of the month (MM).

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## Permissions page

You can set permissions at the application group and group level and for individual users. For example, if you select the ADMIN group and select the Administrator check box, any user assigned to the ADMIN group automatically obtains permission to maintain the application group.

Permissions that you set at the application group level are for groups and users not given specific permissions. If you set permissions for a specific group, the group permissions take precedence over any permissions that you set at the application group level. If you set permissions for a specific user, the user permissions take precedence, regardless of any group the user may belong to or the permissions that you set at the application group level.

The \*APPL GRP entry in the Defined list can be used to set permissions at the application group level. That is, permissions for all groups and users defined to OnDemand and not given specific permissions. To set or change permissions at the application group level, select \*APPL GRP in the Defined list and select the required permissions.

To set permissions for a group, select the group name in the Users/Groups list. The + (plus) character before a name in either the Users/Groups or

Defined list shows a group name. Select the required permissions and choose Add. OnDemand places the name of the group in the Defined list. Every user assigned to the group obtains the permissions that you select.

To set permissions for a user, select the user name in the Users/Groups list, select the required permissions and choose Add. OnDemand places the user name in the Defined list.

## Application Group

The application group permissions determine the type of application group functions that users can perform. Choose from Access, Logical Views, and Administrator.

- **Access.** Lets users search for and retrieve data stored in the application group.  
When you select the Access check box, OnDemand automatically selects the View, Print, FAX, and Copy check boxes in the Document area and the View and Add check boxes in the Annotation area.
- **Logical Views.** Lets users access data stored in the application group and create private logical views with OnDemand client programs.  
When you select the Logical Views check box, OnDemand automatically selects the Access Authority, the View, Print, FAX, and Copy check boxes in the Document area, and the View and Add check boxes in the Annotation area.
- **Administrator.** Lets users access data stored in the application group with OnDemand client programs, maintain the application group with the administrator interface, and load data into the application group. The user can add, modify, and delete public logical views, view annotations stored in the application group, and update and delete the application group.  
When you select the Administrator check box, OnDemand automatically selects the Access and Logical Views check boxes, the View, Add, Print, FAX, and Copy check boxes in the Document area, and the View, Add, and Copy check boxes in the Annotation area.

## Document and Annotation

Table 14 lists the document and annotation permissions.

Table 14. Document and Annotation Permissions

Permission	Document Function	Annotation Function
View	Lets the user view documents with OnDemand client programs.	Lets the user view annotations to documents.



Table 14. Document and Annotation Permissions (continued)

Permission	Document Function	Annotation Function
Add	Lets the user load data into the application group with OnDemand data loading programs.	Lets the user add annotations to documents with OnDemand client programs.
Delete	Lets the user remove data from the application group with OnDemand utility programs.	Lets the user delete annotations with OnDemand client programs.
Update	Lets the user audit documents.	Lets the user make changes to annotations
Print	Lets the user send a copy of a document to a print device.	N/A
FAX	Lets the user send a copy of a document to a FAX or print device. The OnDemand client program generates a cover page and sends it to the output device along with a copy of the document.	N/A
Copy	Lets the user copy selected text or one or more pages of text from a document, a selected area of a document as a bitmap, and lines or fields from the document list to the clipboard.	Lets the user copy annotations to the clipboard.

### Document permissions

Document permissions determine the actions the user can perform. When you select the Access check box, OnDemand selects the View, Print, FAX, and Copy check boxes in the Document area.

The print and FAX actions use the same system services. Accordingly, when you select the Print check box, OnDemand automatically selects the FAX check box (and vice versa).

When you select a check box in the Document area, OnDemand automatically selects the Access check box, if it is not already selected.

### Annotation permissions

Annotation permissions determine the actions the user can perform. When you select the Access check box, OnDemand selects the View and Add check boxes in the Annotation area.

The print and FAX actions are not currently supported.

When you select a check box in the Annotation area, OnDemand automatically selects the Access check box, if it is not already selected.

## Query restriction

You can use the query restriction field to limit access to application group data. The query restriction field allows for item-level security using data values for particular fields in the application group. Specify the query restriction by entering a valid SQL statement in the Query Restriction field. You can enter a maximum of 3000 characters.

For example, assume you wanted to limit the access of a specific group of users to application group data where the value in the account number field is less than 50000. Without a query restriction, when a user enters a search for account numbers equal to or greater than 10000, OnDemand dutifully compiles a hit list of account numbers in the database, including 50000, 50001, and so forth. You could limit access to the data by adding the group name to the Defined list and entering a query restriction similar to the following:

```
ACCT_NO < '50000'
```

In the example, ACCT\_NO is a string field.

For more information about SQL concepts, queries, and statements, please refer to the SQL reference provided with the database manager product you installed on the library server.

---

## Field Definition page

The following recommendations and rules may help you define database fields for an application group:

- You must define at least one database field for the application group. OnDemand supports up to 32 database fields per application group.
- We strongly encourage you to define a date (data type) field.
- You must define a database field for each index field that you define for the source data.

We recommend that you name the database field the same as its corresponding index field. For example, if you use ACIF to index the data, the attribute value that you specify on the INDEX parameter and the database field name should be the same. If you do not name the database field and the index field the same, you must map the index field to the database field when you define the application.

- If you plan to load more than one source of data (application) into the application group, you must define a database field that identifies an application within the application group.
- You can define a database field that allows users to search specific tables of index data, rather than all of the tables that belong to an application group.
- You can define a database field that allows users to construct queries using aliases for actual database values.

Define all of the fields required for the application group before you add the application group. After you add the application group, you cannot add (or remove) fields.

### Database Field Name

When naming database fields, the name that you specify:

- Can contain 1 to 18 characters (bytes).
- Must begin with A through Z. Other characters can include A through Z, 0 through 9, @, \$, \_, and #.
- Can be mixed case.
- Cannot be any of the OnDemand reserved words:

annot	doc_name
comp_len	doc_off
comp_off	pri_nid
comp_type	resource
doc_len	sec_nid

- Cannot be any of the SQL reserved words, such as the string **date** (regardless of case). The SQL reference provided with the database manager product you installed on the library server lists the SQL reserved words.
- Must be unique within the application group.

### Names List

The list of database fields defined for the application group.

---

### Field Information page

#### Name

The information on the Field Information page applies to the field listed in the Name field. Select a name from the list to specify field information for the field.

## Type

Determines whether the field is an index or filter field, or that OnDemand does not create a column in the database for the field. Index fields provide fast database look up but require significant amounts of magnetic storage to support and longer data loading time. Filter fields are generally used with an index field to identify a specific row in the database.

- Select Index when the field uniquely identifies an item stored in the database or if the field is typically used in most queries for application group data.
- Select Filter when the field is not used to identify an item or if the field is always used with an index field to refine a query.
- When you select Not in Database, OnDemand does not create a field in the database and does not load index values for the field into the database. This option may be useful when you are defining a segment field to contain date values and you know all of the values in the report file are the same, for example, February 3, 1995. Instead of storing the same value in every index record, OnDemand can store the value in the segment table that points to the index records. You can save space in the database and may improve the time it takes to load report files if you can define the field in this way. If you select Not in Database, you cannot specify the Application ID Field attribute for the field in the Field Information category.

## Data Type

A database field's data type determines the kind of data that you can load in the field. Select the type from the Data Type list. Possible types are Small Integer, Integer, Decimal, String, Date, Time, Date/Time, and Date/Time (TZ). Table 15 lists and contains a brief description of the data types supported by OnDemand.

Table 15. Database Field Data Types

Data Type	Field Size	Description
Small Integer	2 bytes	Contains whole numbers between $-32,767$ and $32,767$ .
Integer	4 bytes	Contains whole numbers between $-2147483648$ and $2147483647$ . Integer fields require more space to store in the database than small integer fields.
Decimal	8 bytes	Contains numbers between $-10^{307}$ and $10^{308}$ with up to 15 significant digits. You can store money values in a decimal field, and use the precision attribute to format the decimal places.

Table 15. Database Field Data Types (continued)

Data Type	Field Size	Description
String	1—254 bytes	Contains letters, numbers, special symbols, such as the % and #, and any other printable character.  OnDemand supports fixed length strings and variable length strings. OnDemand adds four bytes to the size that you assign to a variable length string.
Date	2 bytes	Contains a valid date from January 1, 1970 to September 17, 2059. If you need to index report files with dates that occur before January 1, 1970, you must define the date as a String field. OnDemand checks a date value to make sure it is valid.
Time	2 bytes	Contains times of day, stored in three second increments, since midnight, and limited to 24 hours.
Date/Time	4 bytes	Contains both a date and time value. The date can be from January 1, 1970 to January 1, 2038. The time is stored in one second increments.
Date/Time (TZ)	4 bytes	Contains both a date and time value. A Date/Time (TZ) field is like a Date/Time field, but uses the time zone set on the client PC. You must make sure that the time zone variable is set whenever the PC is restarted.

## Segment

If the field contains a date or time value, determines whether the field is the segment field for the application group. OnDemand can use the segment field to limit the number of tables it searches to fulfill a query. OnDemand also uses the segment field to determine when to remove data from the application group. Only one field can be designated as the segment field for the application group.

When you create an application group and specify the Multiple Loads per Database Table database organization, we strongly encourage you to define a segment field for the application group. Doing so means that OnDemand can optimize the performance of database queries.

When you create an application group and do not define a segment field, OnDemand issues a warning message. Only under unusual circumstances would you ever create an application group and not define a segment field. If you do not define a segment field, OnDemand uses the report file load date to determine when to expire data from the application group.

When the segment field contains only the month and year (MMYY format), OnDemand expires the segment on the first day of the month (MM).

## **Expire Date**

If the field contains a date or time value, determines whether OnDemand uses the field to delete data from the application group.

When you set the application group Expiration Type to Document, you must designate an Expire Date field. The value of the Expire Date field determines when OnDemand deletes an item from the application group.

When the Expire Date field contains only the month and year (MMYY format), OnDemand expires data on the first day of the month (MM).

## **Partition**

Identifies the field OnDemand uses to evenly distribute index data across multiple servers. You can designate a partition field for the application group if the database resides on more than one server. Only one field can be designated as the partition field. The field must be an index or a filter field.

## **Log**

If you want OnDemand to record the field name and value in messages written to the system log, select the Log check box.

## **User Exit**

If you want OnDemand to pass the field name and value to a user exit program that you supply, select the User Exit check box. OnDemand provides the system log user exit so that you can process information generated by the system.

## **String Case**

- Lower. Index data is loaded into the application group as lower case, regardless of the case in the report file. End-users can type search criteria in any case. OnDemand shifts all search criteria to lower case to complete a database query.
- Upper. Index data is loaded into the application group as upper case, regardless of the case in the report file. End-users can type search criteria in any case. OnDemand shifts all search criteria to upper case to complete a database query.
- Mixed. Index data is loaded into the application group exactly as it appears in the report file. End-users must type search criteria exactly as it appears in the report file.

## String Type

- Fixed. A fixed length database field contains values that are all the same length. The size of the field (String Length, in bytes) cannot vary. If an input index value contains fewer characters than the String Length, OnDemand adds one or more blank characters to the right of the index value to fill the database field. The additional blank characters become part of the field value.
- Variable. A variable length database field can contain values that are different length. The size of the field can vary, up to a maximum value (String Length, in bytes).

## String Length

The size (in bytes) of the database field. The maximum size of a string field is 254 bytes.

If the String Type is Fixed, all values stored in the field contain the same number of characters. When loading data, if an index value contains fewer characters than the String Length, OnDemand adds one or more blank characters to the right of the index value to fill the database field. The additional blank characters become part of the field value.

If the String Type is Variable, OnDemand adds four bytes to the size that you specify. That is, the actual database field size is String Length + 4. However, the four bytes does not affect the field value.

## String Embedded

You can define from one to eight characters that OnDemand removes from search strings entered by the user before OnDemand queries the database.

For example, suppose you define a field to hold phone numbers. The values in the database contain only numbers. That is, the values do not contain the dash character. However, when users query the database, they typically enter search values that include the dash character. Such as 303-555-1212. Since the database values do not contain the dash characters, OnDemand would not find any items that match the query.

You can use the embedded field to allow users to enter search strings that include the dash. Enter a dash in the Embedded field. That way, the user can enter 303-555-1212 (or 3035551212). OnDemand automatically removes all occurrences of the characters specified in the Embedded field found in the search string before querying the database.

**Note:** If you type the blank character in the Embedded field, OnDemand displays a solid box (■). The solid box is for visual purposes only; OnDemand stores a blank character with the application group.

## String Leading

You can define from one to eight characters that OnDemand removes from the beginning of search strings entered by the user before OnDemand queries the database.

For example, suppose you define a field to hold account numbers. The values in the database contain only the significant digits of the account number. For example, the account number 000016161212 is stored as 16161212. However, when users query the database, they typically enter search values such as 000016161212. Since the database values do not contain the leading zeros, OnDemand would not find any items that match the query.

You can use the leading field to allow users to enter search strings that include zeros at the beginning of an account number. Enter a zero in the Leading field. That way, the user can enter 000016161212 (or 16161212). OnDemand automatically removes all occurrences of the characters specified in the Leading field found at the beginning of the search string before querying the database.

**Note:** If you type the blank character in the Leading field, OnDemand displays a solid box (■). The solid box is for visual purposes only; OnDemand stores a blank character with the application group.

## String Trailing

You can define from one to eight characters that OnDemand removes from the end of search strings entered by the user before OnDemand queries the database.

For example, suppose you define a field to hold account numbers. The values in the database contain only the significant digits of the account number. For example, the account number 161612120000 is stored as 16161212. However, when users query the database, they typically enter search values such as 161612120000. Since the database values do not contain the trailing zeros, OnDemand would not find any items that match the query.

You can use the trailing field to allow users to enter search strings that include zeros at the end of an account number. Enter a zero in the Trailing field. That way, the user can enter 161612120000 (or 16161212). OnDemand automatically removes all occurrences of the characters specified in the Trailing field found at the end of the search string before querying the database.



**Note:** If you type the blank character in the Trailing field, OnDemand displays a solid box (■). The solid box is for visual purposes only; OnDemand stores a blank character with the application group.

## Mapping

The Mapping area provides you with the capability to identify an application (source of data) within the application group and define descriptive strings or aliases for obscure index values.

The Mapping area is made up of the Database and Displayed Value fields, the Application ID Field check box, and command buttons. Select the Application ID Field check box to identify the field that contains application identifiers. That is, the field that contains the value that identifies an application within the application group.

### Database Value

The Database Value is the index value that OnDemand uses to query the database.

- For an Application ID Field, OnDemand stores the Database Value in the index records added to the database when data is loaded into the application group.

For string fields, OnDemand stores the value in the database using the case setting of the field. For example, if you enter **abc** and the case is upper, OnDemand stores the value **ABC** in the database.

For fixed length string fields, OnDemand uses the same amount of storage space for every value that you specify, even if a value requires less space. OnDemand adds blank characters to the right of the value. For example, if you enter **abc** and the field length is 8 (eight), OnDemand stores the value **"abc "** in the database (without the quotes). You can enter a maximum of 254 characters, but no more than the String Length.

- For other fields, OnDemand extracts the values from the source data and stores them in the database.
- A database value must match the data type of the field that you are defining. OnDemand validates the values that you enter for Date, Time, Date/Time, and Date/Time (TZ) type fields using the date and time format set in the client operating system.

The Application ID Field must be a string field.

### Displayed Value

The Displayed Value is the value that OnDemand displays in a folder search field.

- OnDemand stores the Displayed Value as a string with the application group. Each string can be a maximum of 254 characters.
- When a user opens a folder that references the application group, OnDemand lists the values in the search field.

### **Application ID Field**

The Application ID Field is the database field that contains values that identify an application within the application group. Only one field can be designated as the Application ID Field. The data type of the Application ID Field must be string.

- Enter strings in the Database Value and the Displayed Value fields for each application contained in the application group.
- Because OnDemand stores the Database Value in every index record added to the database, we recommend that you provide one or two character strings for the Database Values. For example, 01, 02, and so forth.
- Enter a string in the Displayed Value field that corresponds to the Database Value. Because OnDemand stores the string only once, we recommend that you specify values that are meaningful to users in identifying an application. For example, Daily Business Register. The strings that you enter must be unique within the application group.

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## Chapter 21. Add an Application dialog box

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### General page

Table 16. General Page

Field	REQ/OPT	Default Value
Name	REQ	
Description	OPT	
Application Group	REQ	
Application Identifier	OPT	

#### Name

- The application name can be 60 characters in length, including embedded blanks.
- The name cannot include the following characters: ' (apostrophe), % (percent), \_ (underscore), [ (left bracket), ] (right bracket), and " (double quote).
- An application name can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).
- The application name must be unique in the application group where you assign the application.

#### Description

You can enter up to 120 characters of descriptive information about the application in the Description field. For example, you can enter the purpose of the application and the name of the application administrator.

#### Application Group

The application group is where OnDemand maintains index and report data. The application group determines where OnDemand stores data and how long data is maintained on the system. The application must generate index data for one or more of the database fields defined for the application group.

#### Application Identifier

If you assigned the application to an application group that contains more than one application, you must assign an identifier to the application. OnDemand uses the identifier to determine the data that belongs to each application in the application group. Choose the identifier from the Identifier

list. When you load data into the application group, OnDemand stores the identifier in each index record added to the database.

If you assigned the application to an application group that supports only one application, the administrator does not display the Application Identifier list.

---

## View Information page

The View Information page is where you specify information that OnDemand client programs use to display the report.

Table 17. General Page

Field	REQ/OPT	Default Value
Data Type	REQ	AFP
Paper Size	REQ except Line and User Defined	Autosize
Orientation	REQ except Line and User Defined	Default
Code Page	REQ for Line	850
File Extension	REQ for User Defined	
RECFM	REQ for Line	Stream
Delimiter	REQ for Line	0A
CC	REQ for Line	Yes
TRC	REQ for Line	No
CC Type	REQ for Line	ANSI
PRMode	REQ for Line	None
Update ACIF Parameters	OPT for Line	Yes

### Data Type

The data type is the format of the data as it is stored in OnDemand. If the source data is line data but you plan to convert the line data to AFP with ACIF, select AFP as the data type.

- **AFP.** A report stored in OnDemand as AFP data. Select AFP if the source data is AFP or the source data is line data that you plan to convert to AFP with ACIF and store the AFP data in OnDemand.
- **Line.** A report stored in OnDemand as System/370 line data or ASCII data not generated on a System/370. If you select Line, the administrator lists

additional selections on the View Information page. Use the additional selections to further define the characteristics of the line data report to OnDemand.

- BMP. A file that contains a bit-mapped graphic. Also known as a raster image.
- GIF. A bit-mapped color graphics file format.
- JFIF (JPEG). A file that contains image data compressed using the JGEG (Joint Photographic Experts Group) standard.
- PCX. A file that contains a graphic in the PCX file format.
- PDF. A file in the Adobe portable document format.
- TIFF. A bit-mapped image file format for scanned images.
- User Defined. Other types of source data. For example, you can define an application for HTML documents. When you select the user defined data type, you must identify the file extension. The file extension determines the program that is started when a user retrieves the file. For example, if the file extension is HTM, Netscape Navigator could be started to view the file. The client operating system settings determine the program started when the user opens a file with the extension you specify.
- None. Reserved for OnDemand system applications.

## Paper Size

Table 18 lists the paper sizes and dimensions supported by OnDemand.

Table 18. Paper Sizes and Dimensions

Paper Size	Dimensions	Paper Size	Dimensions
Autosize	User defined	Folio	8.5 x 13 inches
Letter	8.5 x 11 inches	Ledger	17 x 11 inches
Letter Wide	11 x 8.5 inches	Tabloid	11 x 17 inches
Legal	8.5 x 14 inches	Quarto	215 x 275 mm
Legal Wide	14 x 8.5 inches	Short	8.5 x 10.5 inches
A3	297 x 420 mm	Statement	5.5 x 8.5 inches
A4	210 x 297 mm	Stationery	8 x 10 inches
A4 Wide	297 x 210 mm	Narrow	10 x 14 inches
A5	148 x 210 mm	Wide	14 x 11 inches
B4	257 x 364 mm	1403W	13.5 x 11 inches
B4 Wide	364 x 257 mm	1403WS	13.5 x 8.5 inches
B5	182 x 257 mm	3800N	8.5 x 10 inches

Table 18. Paper Sizes and Dimensions (continued)

Paper Size	Dimensions	Paper Size	Dimensions
Euro Fanfold	250 x 340 mm	3800NS	11.5 x 7.5 inches
Executive 1	7 x 10.5 inches	3800W	13.5 x 10 inches
Executive 2	7.25 x 10.5 inches	3800WS	13.5 x 7.5 inches
Executive 3	7.5 x 10.5 inches	Cut Sheet	17 x 22 inches

**Note:** If you select Autosize, OnDemand client programs display items based on information in the data stream, and for AFP data, the page definition. If the report has no internal definition for page size, OnDemand displays items at 8.5 by 11 inches.

If the report contains different size pages and there is information in the data stream that describes the size of the pages, select Autosize. OnDemand client programs will display each page according to the information in the data stream.

## Orientation

Determines the alignment of data on a page. That is, the direction that OnDemand client programs display pages of the report. Choose from Default, 90, 180, and 270.

## Code Page

If you are defining an application for a line data report, verify, and if necessary, change the value of the Code Page field. The value that you specify determines the code page the OnDemand client programs use to display pages of the report. You can enter any valid code page in the space provided. For example, code page 850 is typically used to display an ASCII line data report. Code page 500 is typically used to display an EBCDIC line data report.

For all other types of data, OnDemand derives the code page from the data stream. For example, information in an AFP data stream determines the code page (AFP supports multiple code pages in a single document).

## File Extension

For User Defined data types, enter the three-character file extension that identifies the type of the file to the client operating system. The client operating system settings determine the program started when the user opens a file with the extension you specify.

## RECFM

For line data reports, verify the record format (RECFM) of the data. Choose from Fixed, Variable, and Stream.

- A fixed length report file contains records that are all the same length. The size of the records (in bytes) cannot vary.
- A variable length report file can contain records of different length.
- Choose stream when the report file contains records of undetermined length, but records in the file are delimited with a special character or set of characters. If you select this record format, you must specify the character or set of characters that separate records in the file in the Delimiter field.

## Delimiter

If you selected a RECFM of Stream for the application, specify the Delimiter. Enter the ASCII hexadecimal characters that separate records in the report file, for example, 0A.

## LRECL

For line data reports that contain fixed length records, the length of a record. The LRECL (logical record length) is the number of bytes needed to hold any record in the file.

## CC

If the line data contains carriage control characters, set CC to Yes. A carriage control character is usually the first character of an output record (line) in the report file. For example, a carriage control character can determine how many lines should be skipped before the next line is printed.

## TRC

If the line data contains table reference characters, you must set TRC to Yes, even though OnDemand does not support the use of table reference characters.

A table reference character is usually the second character of an output record (line) in the report file. Some application programs may produce output that uses different fonts on different lines of a report file, by specifying table reference characters at the beginning of each line after the carriage control character. The character contains a value (0–126) that is used to select a font to display or print the line.

## CC Type

If the line data contains carriage control characters, select the type of carriage control characters. The type can be ANSI or Machine:

- ANSI. The input contains ANSI carriage control characters encoded in ASCII or EBCDIC. The carriage control action occurs before the line is printed.
- Machine. The input contains machine carriage control characters. The carriage control action occurs after the line is printed.

## PRMode

If the line data contains shift-in and shift-out codes, set the PRMode (processing mode). The processing mode determines whether the input file contains shift-in and shift-out codes, and if so, how OnDemand handles the codes. Shift-in and shift-out codes can be used to substitute single-byte characters in the standard character set with double-byte characters from an alternate character set.

Choose from None, SOSI1, SOSI2, and SOSI3.

- None means the report file does not contain shift-in and shift-out codes.
- SOSI1 means that OnDemand converts shift-in and shift-out codes to a blank character and a Set Coded Font Local control.
- SOSI2 means that OnDemand converts shift-in and shift-out codes to a Set Coded Font Local control.
- SOSI3 means that OnDemand converts a shift-out code to a Set Coded Font Local control and a shift-in code to a Set Coded Font Local control and two blank characters. The SOSI3 data conversion is the same as the SOSI3 data conversion performed by PSF/MVS.

## Update ACIF Parameters

For line data indexed with ACIF, determines whether OnDemand coordinates indexing-related information on the View Information page with the ACIF Parameters. By default, the information matches and if you change a value in one place, OnDemand automatically changes the value in the other place. If you need to maintain different information on the View Information page and the ACIF Parameters, you must first clear the Update ACIF Parameter check box.



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## Indexer Information page

The Indexer Information page is where you specify how the report data is indexed and define the parameters, options, and data values used by the indexing program to locate and generate index data. If the data you plan to load is already indexed, you do not need to provide indexer information.

Table 19. Indexer Information Page

Field	REQ/OPT	Default Value
Indexer	REQ	None
Parameters Source	OPT	
Indexer Parameters	OPT	

### Indexer

Identifies the type of index data.

- **ACIF.** The index data is generated by the AFP Conversion and Indexing Facility (ACIF). The data type of the application (set on the View Information page) must be AFP or Line.
- **Generic.** The input data will be indexed using the OnDemand generic indexer. If the data type of the application (set on the View Information page) is BMP, JFIF, PCX, PDF, TIFF, or User Defined, you must select Generic.
- **PDF.** The input data will be indexed using the OnDemand PDF indexer. The data type of the application (set on the View Information page) must be PDF.
- **None.** Reserved for OnDemand system applications.

### Parameters Source

If the Indexer is ACIF or PDF, you can specify indexing parameters, options, and data values using one of the following methods:

- **Keyboard.** Type indexing parameters, options, and data values into an edit window. Click Modify to display the edit window.
- **Parameter File.** Import a PC file that contains indexing parameters, options, and data values. Click Modify to display the Open dialog box. Type the name or drive and full path name of the input file or select a filename from the list. Then choose Open. OnDemand loads the contents of the file into the Indexer Parameters area. You can modify the indexing parameters, options, and data values that OnDemand loaded into the Indexer Parameters area. Choose Keyboard. Then click Modify to display the edit window.

- **Sample Data (ACIF Only).** Process a sample line data report with the ACIF graphical indexer. Click **Modify** to display the **Open** dialog box. Type the name or drive and full path name of the input file or select a filename from the list. Then choose **Open**. OnDemand loads the file into the report window. Use the graphical indexer to create and maintain indexing parameters, options, and data values.

## Indexer Parameters

Lists the current indexing parameters for the application. OnDemand refreshes the list when you modify the indexing information, change the indexer, or make changes on the **View Information** page.

---

## Load Information page

The **Load Information** page is where you specify information that the OnDemand data loading programs use to process report and index data before loading it into the database and on storage volumes.

- The **File Format** choices that you make determine how OnDemand compresses and stores report data and resources.
- The **Preprocessor Parameters** determine processing performed on a field-by-field basis, before OnDemand creates index records. For example, you may want OnDemand to remove characters from an index field before storing the index values in the database.
- The **Postprocessor Parameters** determine processing performed on the entire index file. For example, you may want OnDemand to remove duplicate records from the index file before loading the records into the database.

Table 20. Load Information Page

Field	REQ/OPT	Default Value
Data Compression	REQ	OD77
Resource Compression	REQ for AFP	OD77
Large Object	OPT	
Number of Pages	REQ for Large Object	100
Compressed Object Size (K)	REQ, if not Large Object	100
Load ID Name	REQ	application group database field name
Default Value	OPT	
Format	REQ for date and time fields	%m/%d/%y (date)

Table 20. Load Information Page (continued)

Field	REQ/OPT	Default Value
Divide By	REQ for small int, integer, and decimal fields	1 (small int, integer); 100 (decimal)
Embedded	OPT	,. for small int, integer, decimal
Leading	OPT	
Trailing	OPT	
Use Page Identifiers	OPT	
Postprocessor Parameters	OPT	

## Data Compression

Determines the method OnDemand uses to compress report file data. Choose from LZW12, LZW16, OD77, None, and Disable.

**Note:** To determine the best compression method for a particular report, we recommend that you compress a sample of the data using each of the supported compression methods. Compare the compressed file sizes and the time required to compress the data to determine the best compression method for the report.

- LZW12. Data compressed using 12-bit LZW algorithm.
- LZW16. Data compressed using 16-bit LZW algorithm.
- OD77. Data compressed using a LZ 77 algorithm. This is the default and recommended compression method.

OnDemand handles all compression and uncompression of report file data. OnDemand compresses report file data before the storage manager loads it on storage volumes. The storage manager does not compress the data. When a user selects an item for viewing, OnDemand sends compressed data over the network and uncompresses it at the client.

- None. OnDemand and the storage manager share data compression roles. OnDemand does not compress report file data when loading data. The storage manager compresses data before loading it on storage volumes and uncompresses the data before sending it to the server. OnDemand compresses the data before sending it over the network and uncompresses the data at the client.

Use caution when choosing this option. The storage manager should use a technique that compresses data better than OD77. Also, when you choose None, the storage manager must retrieve the entire storage object. OnDemand cannot use partial object retrieval, which significantly improves data retrieval performance.

- **Disable.** OnDemand does not compress report file data. The storage manager does not compress report file data.  
Choose this option when defining an application for image data that is already compressed, such as TIFF with images compressed using CCITT G3 or G4.

## Resource Compression

Determines the method OnDemand uses to compress AFP resources. Choose from LZW12, LZW16, OD77, None, and Disable.

- **LZW12.** Resources compressed using 12-bit LZW algorithm.
- **LZW16.** Resources compressed using 16-bit LZW algorithm.
- **OD77.** Resources compressed using a LZ 77 algorithm. This is the default and recommended compression method.

OnDemand handles all compression and uncompression of resources.

OnDemand compresses resources before the storage manager loads them on storage volumes. The storage manager does not compress resources. When a user selects an item for viewing, OnDemand sends compressed resources over the network and uncompresses them at the client.

- **None.** OnDemand and the storage manager share resource compression roles. OnDemand does not compress resources when loading data. The storage manager compresses resources before loading them on storage volumes and uncompresses resources before sending them to the server. OnDemand compresses resources before sending them over the network and uncompresses resources at the client.

Use caution when choosing this option. The storage manager should use a technique that compresses resources better than OD77. Also, when you choose None, the storage manager must retrieve the entire storage object. OnDemand cannot use partial object retrieval, which significantly improves data retrieval performance.

- **Disable.** OnDemand does not compress resources. The storage manager does not compress resources.

Choose this option when defining an application for AFP data that contains resources that are already compressed.

## Large Object

When you use ACIF to generate index data, OnDemand can keep additional information about the indexed groups. OnDemand uses the information to retrieve and display documents. For example, assume that a report contains statements. The statements can contain 100 or more pages. Rather than retrieving the entire statement, OnDemand can retrieve a set number of pages at a time, providing better viewing performance and decreasing the load on the network.

When you choose Large Object, OnDemand displays the Number of Pages field. Enter the number of pages you want OnDemand to maintain in a large object in the Number of Pages field.

You must select ACIF as the Indexer on the Indexing Information page to use large objects.

### **About large objects**

Large object support is designed to provide enhanced usability and better retrieval performance for report files that contain very large logical items. For example, suppose a report file contains customer statements. Individual statements in the file typically exceed 1,000 pages. With large object support, the report file can be stored as a set of groups of pages, for example, 20 pages per group. When a user views a statement, OnDemand retrieves and decompresses the first group of pages for the statement. To view a specific page of a statement, the user can choose the Go To command in the viewer window and enter the page number. OnDemand automatically retrieves and decompresses the group that contains the requested page. When the user scrolls from page to page of a statement, OnDemand automatically retrieves and decompresses the appropriate pages.

When you implement large object support, users should experience consistent response time while scrolling from page to page of the report file. There are several factors that you need to consider when implementing large object support:

- The report file must be indexed with ACIF, to provide OnDemand with the required indexing information.
- The amount of data per page and the number of pages per group has an impact on retrieval and viewing response time. The number of bytes per page typically dictates the number of pages in a group. Usually, the larger the page size in bytes, the smaller the group of pages. For example, if the average page in the document contains 2.5 KB of data, choose a range of 10 to 100 pages per group. If the average page in the document contains 50 KB of data, choose a range of 1 to 5 pages per group.
- The capacity of your network and the traffic on the network may determine the number of pages in a group. Groups of pages that contain many bytes require more network bandwidth to transfer from an OnDemand server to a client. The number of users concurrently accessing OnDemand and the application determine the overall load on the network.
- Response time requirements. The goal of OnDemand large objects is to provide better performance and usability for end users. Large object support clearly provides enhanced usability. However, you must implement

large object support so that dividing the report file into groups of pages provides better overall performance than other methods of segmenting the report file.

### **Number of Pages**

Determines the number of pages in a large object. This is the number of pages that OnDemand retrieves and decompresses at a time. You can specify a number from 1 to 1023.

### **Compressed Object Size (K)**

Determines the number of bytes in a fixed-size block of report file data. By default, OnDemand compresses report data into 100 KB blocks.

You can specify a number between 1 and 99999. However, we recommend that you accept the default value. Specifying too small a value can result in less optimal document compression. Choosing too large a value can result in less efficient document storage and retrieval.

The value of the compressed object size must be less than or equal to the size of the storage object for the application group where you assigned the application. The default size of a storage object is 10 MB. The maximum size of a storage object is approximately 100 MB.

### **Application Group DB Name**

A list of the application group database field names. The information in the Preprocessor Parameters area applies to the field that is selected in the list.

### **Load ID Name**

The name of the index field (defaults to application group database field name). If the name of the index field is different than the name of the application group database field, you must enter the name of the index field in the Load ID Name field.

### **Default Value**

Optionally specify a Default Value for the field. When you load data into an application group, OnDemand stores an index value into each database field defined for the application group. The indexed items in a report file usually contain an index field (and value) for each database field. However, if an item does not contain an index field, you must specify a default value for the database field. If the index field does not exist and you do not specify a default value, the load will fail.

There are two primary uses for the Default Value:

- Not every indexed item in the report contains all of the fields required by the application group. This may occur when you index reports with ACIF and you define one or more floating triggers. A floating trigger may or may not exist in the input. For example, you define three index fields: *run\_date*, *account*, and *awards*. You define the *awards* field as a floating trigger. Therefore, some of the indexed items may not contain the *awards* field. However, because you defined the field in the application group, you must specify a default value for the field, so that OnDemand has a value to use when an indexed item does not contain the *awards* field. For example, assume that *awards* is a string field. You enter **NONE** in the Default Value field. OnDemand stores the characters **NONE** in the database, when the field does not exist in an indexed item.
- The report does not contain a date. However, the application group where you plan to load the data contains a date field (every application group must contain at least one date field). You must enter a default value for the date field. You can enter a **t** (lowercase letter t) in the Default Value field. OnDemand stores the load date in every row added to the database. You can also enter a specific date in the Default Value field. This may be useful when you need to load reports that are several years old. OnDemand stores the date that you specify in every row added to the database.

If the index field exists in the indexed item, OnDemand always uses the value of the indexed item.

## Format

If the field is a date or time field, specify the Format using a format specifier. The format describes the appearance of the date or time value in the source data. A format specifier consists of a set of values (for example, **%m**) and separators. Specify the order that the day, month, year, hours, minutes, and seconds appears in the report file. Exclude a value if that part of the date or time does not appear in the report file. Add value separators where required. That is, / (forward slash) and - (dash). For example, **%d %B %Y** represents dates that appear in the format **31 January 1995**. Date strings are not case sensitive. For example, you can specify **%B** for dates that contain strings like January, JANuary, or JANUARY.

Table 21 lists the format specifiers provided by OnDemand.

Table 21. Date and Time Formats

Format Specifier	Format	Example
<b>%m/%d/%y</b>	mm/dd/yy	01/31/95
<b>%d/%m/%y</b>	dd/mm/yy	31/01/95
<b>%f/%e/%y</b>	m/d/yy	1/31/95

Table 21. Date and Time Formats (continued)

%e/%f/%y	d/m/yy	31/1/95
%m-%d-%y	mm-dd-yy	01-31-95
%d-%m-%y	dd-mm-yy	31-01-95
%m%d%y	mmddy	013195
%m%d%Y	mmddyyyy	01311995
%y%m%d	yymmdd	950131
m%d	yyyymmdd	19950131
%b %e, %Y	Mth d, yyyy	Jan 31, 1995
%B %e, %Y	Month d, yyyy	January 31, 1995
%m/%d/%y %H:%M	mm/dd/yy hh:mm	01/31/95 10:50
%H:%M	hh:mm	10:50
%T	hh:mm:ss	10:50:59

You can select a format from the Format list or type a format in the entry field, if the format that you require is not listed. If you do not specify a format, OnDemand uses the default date format from the system where the data is loaded.

## Divide By

Determines the number of decimal places for small int, integer, and decimal fields. The default is 1 (no decimal places) for small int and integer fields and 100 (two decimal places) for decimal fields. The Divide By field is used with the Embedded field to correctly store decimal values in the database. When you select a small int or integer field in the Application Group DB Name list, the administrator places a 1 (one) in the Divide By field and a , (comma) and a . (decimal) in the Embedded field. When you select a decimal field in the Application Group DB Name list, the administrator places a 100 in the Divide By field and a , (comma) and a . (decimal) in the Embedded field.

## Character Removal

Optionally specify Character Removal processing for the field. You can define from one to eight characters that OnDemand removes from index values extracted from the report file, before the index data is loaded into the database. OnDemand can remove Embedded, Leading, and Trailing characters from index values.

- For example, if you specify - (dash) in the Embedded field, OnDemand removes any - (dash) characters found within index values.



- If you specify **1** (one) in the Leading field, OnDemand removes any **1** (one) characters at the beginning of index values.
- If you specify **0** (zero) in the Trailing field, OnDemand removes any **0** (zero) characters from the end of index values.

OnDemand removes characters from index values until it encounters the first character not part of the character removal “mask”. For example, if you specify **01-** (zero one dash) in the Leading field, and the index value is **1001-50016834**, OnDemand removes **1001-**, storing the index value **50016834**.

If you type the blank character in the embedded, leading, or trailing fields, OnDemand displays a solid box (■). The solid box is for visual purposes only; OnDemand stores a blank character in the database.

**Note:** To find an exact match, the search string that the user enters must match a value in the database. If you remove a character from index values, the user must enter a search string that does not include the character that you removed. Otherwise, you must remove the character from the search string before OnDemand queries the database. The Field Information category under application groups describes how to remove a character from the search string entered by a user before OnDemand queries the database.

## Use Page Identifiers

For AFP files, set this flag if you want OnDemand to list page identifiers in addition to sheet numbers.

OnDemand lists the page identifiers and sheet numbers in the Go To dialog box. End-users can navigate through the item they are viewing with page identifiers and sheet numbers.

A sheet number is the number of a page in the order which the pages are displayed by OnDemand. OnDemand displays the sheet number of the page being viewed and the total number of sheets in the item being viewed on the status bar.

A page identifier is information that identifies each page in an item. A page identifier is typically printed as part of the header or footer of a page. For example, **xvii**, **138**, and **A-12**.

We recommend that you set the page identifiers flag when you define an application for online books, such as the OnDemand publications. Otherwise, do not set the flag.

If you enable large object support for the application, setting the page identifiers flag can result in a significant amount of overhead when storing and retrieving report file data. OnDemand must extract the page identifiers when loading the data and keep track of the page identifiers when a user retrieves an item for viewing.

## Postprocessor Parameters

You can optionally define Postprocessor Parameters for the index file. OnDemand uses the options that you specify to process the entire index file before loading the index data into the database.

You can enter the full path and filename of an operating system command or user-defined program that OnDemand calls to process the index file. For example, for an AIX server, if you specify `/bin/sort | /bin/uniq`, OnDemand removes duplicate records from the index file.

**Note:** You should investigate other alternatives before deciding that you want OnDemand to postprocess the index file. For example, the program that creates the index file may provide user exits that allow you to customize how the data is indexed before the index file is created.

---

## Logical View Fields page

The Logical View Fields page is where you specify header information and define fields that can be used to create logical views for line data reports.

The Header area is where you provide information about the page and field headings and identify the string that OnDemand uses to verify that pages of the report can be displayed with the logical view selected by the user.

OnDemand uses a *validation field* to verify that the page can be displayed with the selected logical view. The validation field is made up of the Validation Row, Validation Column, and Validation String. OnDemand locates the validation field using the Validation Row and Column values that you provide. If OnDemand does not find the Validation String in the record and row specified by the Validation Row and Column, the client program does not use the logical view.

The Field Definitions area is where you define fields that can be included in a logical view. You assign a Field Name and provide the beginning of the field (Start Column) and the end of the field (End Column). You can also link a logical view field to an application group database field. You can define up to thirty logical view fields.

## **Page Header Rows**

Determines the number of lines in the page heading. When you define a logical view with the Lock Header attribute, OnDemand locks the number of page heading rows you specify when users scroll through pages of the report.

When you calculate the number of page heading rows to lock, include blank lines, where appropriate. For example, you probably want to include a blank line after the last text line of the page heading.

## **Field Header Rows**

Determines the number of lines in the report file column heading. When you define a logical view with the Lock Header attribute, OnDemand locks the number of field heading rows you specify when users scroll through pages of the report.

When you calculate the number of field heading rows to lock, include blank lines, where appropriate. For example, you probably want to include a blank line after the last text line of the field heading.

## **Validation Row**

The record number that contains the Validation String.

## **Validation Column**

The column number where OnDemand can locate the beginning of the Validation String.

## **Validation String**

The one to eight character string that OnDemand uses to validate that the current page can be displayed with the logical view.

## **Field Name**

The name of the logical view field. When you define a logical view field, the name that you assign to the field appears in the Find dialog (OnDemand client programs). Users can search the item they are viewing using the field name.

## **Appl Group DB Name**

A list of application group database field names.

Allows you to link the logical view field to a field in the application group so that OnDemand can locate the specific line in the document that matches the

search criteria entered by the user. For example, after completing a search, assume the user selects a document with a logical view that contains a logical view field linked to an application group database field. OnDemand does a search within the selected document, using the search criteria the user entered for the linked field. OnDemand highlights the line in the document that matches the search criteria.

### **Start Column**

The starting column number where the field is located. When you define a logical view with the Lock Fields attribute, OnDemand calculates the size of the field using the Start and End Column values.

When you specify the start column, include blank columns, where appropriate. For example, you may want to include a blank column before the first column of significant data in the field. That way, OnDemand can display the field, separated with blank spaces.

### **End Column**

The ending column number where the field is located. When you define a logical view with the Lock Fields attribute, OnDemand calculates the size of the field using the Start and End Column values.

When you specify the end column, include blank columns, where appropriate. For example, you may want to include a blank column after the last column of significant data in the field. That way, OnDemand can display the field, separated with blank spaces.

### **Field#**

OnDemand assigns a number to each logical view field that you define. Use the numbers when you specify the order that the fields appear in a logical view (on the Logical Views page).

### **Fields**

The list of logical view fields defined for the application.

---

## **Logical Views page**

The Logical Views page is where you define public logical views for the application and private logical views for individual users.

You can define up to twenty public logical views. A user that has logical views permission for the application group may have up to twenty private logical views.

Table 22. Logical Views Page

Field	REQ/OPT	Default Value
Users with Logical Views	REQ	*APPLICATION
User	REQ	*APPLICATION
Name	REQ	
Image Color	REQ for AFP	Black
Image Intensity	REQ for AFP	Normal
Selected Area Color	REQ	Yellow
Background Color	REQ	White
Text Fidelity	REQ	Line
Default View	OPT	No
Zoom	REQ	100
Copy Group	REQ for AFP	1
Lock Header	OPT for line data	No
Lock Fields	OPT for line data	0
Field Order	OPT for line data	
Scale to Gray	OPT for BMP, JFIF, PCX, TIFF	Yes
Contrast	OPT for BMP, JFIF, PCX, TIFF	128
Brightness	OPT for BMP, JFIF, PCX, TIFF	128

## Users

A list of the users defined to the library server. Before you can define a logical view for a user, you must add the user name to the Users with Logical Views list.

## Users with Logical Views

You can define logical views for the names in this list. The \*APPLICATION name is for public (application) logical views. All users that can access the application can use the logical views that you define for the application.

## User

The information in the Defined Views list and the Defined View Information area applies to the name listed in the User list.

Select a name to add, update, and delete logical views. Select \*APPLICATION to add, update, and delete public (application) logical views. Select a user name to add, update, and delete private logical views.

## Defined Views

A list of public logical views (for \*APPLICATION) or private logical views (for the user listed in the User field).

### Name

The name of the logical view. A logical view name:

- Can be from 1 to 30 characters, including embedded blanks.
- Must be unique to the application, for a public view. Must be unique to the user, for a private view.
- Can be typed in upper, lower, or mixed case letters. However, the case does not create a unique name (View1 is the same as view1).

### Image Color

Determines the color that OnDemand uses to display the colors in an image on the page. The default image color, Black, means that OnDemand displays images in black. Choose from Black, Red, Blue, Green, Yellow, Magenta, or Cyan.

### Image Intensity

Determines how much intensity OnDemand uses to show image data. Choose from Normal (show the image), Light (show the image with a lighter shading pattern), and None (do not show the image).

### Selected Area Color

Determines the color with which a selected area is displayed. Choose from Black, White, Red, Blue, Green, Yellow, and Grey.

### Background Color

Determines the background color of the displayed page. Choose from Black, White, Red, Blue, Green, Yellow, Grey, and Green Bar Alternating Stripes.

### Text Fidelity

Determines how OnDemand displays text. Allows you to increase display performance at the expense of text fidelity. The settings in order of improving performance are:

- Character. Positions each character individually.

- 240-Pel Font Adjustment. Adjusts the position for characters that have been specifically placed for a 240-pel device.
- Word. Positions each word individually.
- Line. Positions each line of text individually. This is the default.
- Draft. Performs no position adjustment (such as variable spacing, intercharacter adjustment, and character rotation) and yields minimum fidelity.

### **Default View**

The logical view that OnDemand client programs use to display pages when the user initially selects an item for viewing.

### **Zoom**

Determines the percentage that OnDemand client programs enlarge or reduce the report file on the display when a user selects an item for viewing. You can enlarge the page to make it easier to read or reduce the page so that the user can view the entire page. You can enter a whole number from 10 to 1000 (percent).

### **Copy Group**

Determines the copy group for the document. A copy group is a portion of a form definition that defines a set of modifications that can be used when viewing a page. Modifications can include text suppression, form flash, overlays, and so forth. For certain types of documents, it is possible to view a page multiple ways. For example, copy group one could be used to view a replica of a bill sent to the customer while copy group two could be used to view additional information attached to the bill but not sent to the customer.

### **Lock Header**

Locks the page and field titles in view when the user scrolls the page in a vertical direction. OnDemand locks the number of report title rows specified on the Logical View Fields page.

### **Lock Fields**

The number of fields that remain in view when the user scrolls the page horizontally. The maximum number of fields that can be locked is the number of fields defined in the Field Order field. For example, if the Field Order field contains 1,5,2,3,4,5, then the maximum number of fields that can be locked in place is six.

## Field Order

For line data reports, determines the order fields appear when OnDemand displays the page. The physical layout of the fields in the source data does not matter.

Specify the Field Order as a string of comma-separated values. For example, 1,5,2,3,4,5. You can specify one or more of the available Field# values assigned on the Logical View Fields page.

## Scale to Gray

A technique used to enhance image display quality by smoothing the edges of jagged lines and text in an image. Also enables the contrast and brightness controls in the client program. The data type of the application must be BMP, JFIF, PCX, or TIFF.

## Contrast

Allows the user to increase or decrease the range of brightness in an image. To enable the contrast control in the client program, you must select the Scale to Gray check box. The data type of the application must be BMP, JFIF, PCX, or TIFF. The default value is 128; you can enter a whole number from 0 to 255.

## Brightness

Allows the user to brighten or darken an image. To enable the brightness control in the client program, you must select the Scale to Gray check box. The data type of the application must be BMP, JFIF, PCX, or TIFF. The default value is 128; you can enter a whole number from 0 to 255.

---

## Print Options page

The Print Options page is where you choose the default printing options for the application.

### Windows Default Options

Choose the default print option that the Windows client program uses when the end-user selects the Print command. Choose whether the Windows client program prints all the pages or the current page of the item that the end-user is viewing.

The end-user can override the default print option after selecting the Print command.



## Default Server Printer

Choose the default server printer for the application from the Default Server Printer list. By default, all server print requests for the application are sent to this printer.

Select \*NONE, if you do not want to identify a default server printer.

If you select a default server printer, the user can choose a different server printer after selecting the Print command from the client program.

## CICS JCL Parameters

You can optionally specify a string of keywords and values that the CICS/ESA client program uses to construct an *OUTDES* JCL statement. OnDemand passes the parameters that you specify to JES for every print request for the application. The end-user has no opportunity to override the parameters when they select items for printing.

You can enter any valid OUTDES keyword and value in the CICS JCL Parameters field. The syntax is:

```
keyword1 keyword2(value1) keyword3(value1, value2)
```

The following example shows a set of keywords and values that cause OnDemand to print the department and room number on the page that separates print files in the printer output bin:

```
DEPT(G76A) ROOM(104B-2)
```

Refer to the OUTDES command in the *TSO/E Command Reference* for details about valid keywords and values you can specify to support printing from the OnDemand CICS/ESA Client program.

## Server PSF for AIX Parameters

You can enter a set of parameters that determine the application printing options when a user chooses the server print command from the client program to print an item retrieved from the database.

When the user chooses the server print command, OnDemand calls the PSF for AIX print command and passes the options that you specify to the print command. The end-user has no opportunity to override the parameters when they select items for printing.

You can use the Server PSF for AIX Parameters field to pass PSF for AIX-specific information to the OnDemand print command, which then sends the job to the printer. The `-o` flag is used to pass information to OnDemand. The syntax is:

```
-okeyword1=value -okeyword2=value2 -okeyword3=value3 ...
```

You can specify any valid `-o` flag keyword and value. For example, you can use `-o` flags to specify the type of the input data stream, the distribution information that PSF for AIX prints on header, separator, and trailer pages, whether the output prints simplex, duplex, or tumble duplex, the form definition that defines the placement of data on the page, the directories that contain custom resources, and for System/370 line data or ASCII data, the page definition that determines font selections, print direction, and so forth.

The following example shows a set of keywords and values that can be used to print or FAX line data reports. The input data contains ANSI carriage control characters encoded in EBCDIC. The example uses the standard PSF for AIX form and page definitions for 8.5 inch by 11 inch cut sheet pages with a portrait orientation:

```
-odatatype=line -occ=yes -occtype=a -otrc=no -ofileformat=record  
-oformdef=F1A10110 -osrchdeflib=/usr/lpp/psf/reslib  
-opagedef=P1A06462 -opdeflib=/usr/lpp/psf/reslib
```

Refer to the chapter about keywords used with the `-o` flag in the *PSF for AIX: Print Submission* publication for details about the valid keywords and values that you can specify to support printing to a server printer controlled by PSF for AIX.

## AFP to Line Data Command

The AFP to line data parameters determine the options for the *arsview* command. OnDemand calls the *arsview* command to convert AFP to line data so that the CICS/ESA client program can display the information on a 3270, line-mode terminal.

For a report that contains AFP data, the *arsview* command can be used to convert the AFP format report files to line data files so that the OnDemand CICS/ESA client program can display the information contained in the report files on a 3270, line-mode terminal. You can use the AFP to Line Data Command field to enter the parameters and values that describe certain characteristics of the file. For example, you can specify the orientation of the data on the page, the number of print lines per inch, and the height and width of the page.

The following example shows a set of AFP to Line Data Command parameters. In the example, OnDemand creates a line data file with 8 print lines per inch, page dimensions of 11 inches by 8.5 inches, and text rotated 90 degrees:

```
-l 8 -w 11 -h 8.5 -o 90
```

Refer to the *arsview* command in the *Administrator's Reference* for more information about the *arsview* command and details about the parameters and values that you can specify to convert AFP files to line data files to support viewing on a 3270, line-mode terminal.



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## Chapter 22. Add a Folder dialog box

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### General page

The General page is where you name the folder, select the application groups that can be queried using the folder, and determine when OnDemand retrieves annotations to items stored in the database.

Table 23. General Page

Field	REQ/OPT	Default Value
Name	REQ	
Description	OPT	
Display Document Location	OPT	No
Note Search	REQ	Retrieve
Application Groups	REQ	

#### Name

- The name can be a maximum of 60 characters, including embedded blanks.
- The folder name cannot include the following characters: ' (apostrophe), % (percent), \_ (underscore), [ (left bracket), ] (right bracket), and " (double quote).
- A folder name can be mixed case. However, the case does not create a unique name (LaGuarde is the same as laguarde).
- The folder name must be unique in OnDemand.

#### Description

You can enter up to 120 characters of descriptive information about the folder in the Description field. For example, you can enter the purpose of the folder and the name and phone number of the folder administrator.

#### Display Document Location

Determines whether OnDemand displays the storage location of each item in the document list. The storage location can be cache storage or archive media. The storage location of an item may indicate how long it takes to retrieve the item.

## Note Search

Determines when OnDemand searches the database for annotations and when OnDemand notifies users that annotations exist for items that match a query.

**Note:** OnDemand uses the Note Search when you set the annotation flag in the application group to No. Otherwise, when an annotation exists for an item, the client programs automatically display a note icon next to the item in the document list.

- **Retrieve.** OnDemand searches the database when the end-user selects an item for viewing. This is the default and recommended note search setting.
- **Note.** OnDemand searches for annotations when the end-user selects the Note command when viewing an item.
- **Hit List.** OnDemand searches for annotations when the end-user enters a query. When an annotation exists for an item, the client programs display a note icon next to the item in the document list. This method has a direct performance impact on the generation of the document list.

## Application Groups

You can select one or more application groups to include in the folder. When you add an application group to the folder, you provide access to the data stored in the application group.

## Applications

If the application group that you added to the folder contains more than one application, you can limit access to specific applications.

For example, suppose an application group contains two applications, one for student grades and another for student bills. You can remove the student bills application from the folder. That way, when users query the database using the folder, they retrieve only student grade information, even though student billing data is also stored in the application group.

---

## Permissions page

You can set permissions at the folder level, group level, and for individual users. For example, if you select the ADMIN group and set the administrator permission, any user assigned to the ADMIN group automatically obtains permission to maintain the folder.

The permissions that you set at the folder level apply to all users not given specific permissions. If you set permissions for a specific group, the group permissions take precedence over any permissions that you set at the folder

level. If you set permissions for a specific user, the user permissions take precedence, regardless of any group the user may belong to or the permissions that you set at the folder level.

The \*FOLDER entry in the Selected list can be used to set permissions at the folder level. That is, permissions for all groups and users not given specific permissions. To set or change permissions at the folder level, first select \*FOLDER in the Selected list and then set the permissions.

To set permissions for a group, select the group name in the Users and Groups list, set the desired permissions, and choose Add. OnDemand places the name of the group in the Selected list. Every user assigned to the group obtains the permissions that you set.

To set permissions for a user, select the user name in the Users and Groups list, set the desired permissions, and choose Add. OnDemand places the user name in the Selected list.

Table 24. Permissions Page

Field	REQ/OPT	Default Value
Authority	OPT	None
Named Queries	OPT	None
User/Group Fields	REQ	No
Maximum Hits	REQ	-1
Selected	REQ	*FOLDER

## Authority

These permissions determine the folder functions that users can perform.

- Access lets users open the folder with OnDemand client programs.
- Fields allows users to maintain folder field information. A user can modify the folder field information with the administrator interface.

When you select the Fields check box, OnDemand automatically selects the Access check box if it is not already selected.

- Administrator lets users open the folder, make changes to the folder fields, authorize other users to access the folder, and update and delete the folder. The user that creates the folder is automatically given administrator authority for the folder.

When you select the Administrator check box, OnDemand automatically selects the Access and Fields check boxes. However, OnDemand does not automatically create a copy of the folder fields for the selected user or group.

If you select the Administrator check box for a group, any user assigned to the group can maintain the folder.

## Named Queries

These permissions determine whether the user can create, delete, modify, or view named queries.

A named query is a specific set of search criteria for a folder that has been saved by name and can be selected and restored into folder search fields at a later time.

- **Public.** A named query that is available to any user with authority to access the folder. Lets users add, update, and delete the named queries that are generally available to any user that can access the folder.
- **Private.** A named query that is available to the user that saved the query. A system administrator or application group/folder administrator can also access private named queries. Lets users add, update, and delete private (non-shared) named queries.
- **View.** Lets users select and restore private and public named queries to folder search fields. The view named queries permission does not let users add, update, or delete named queries.

## User/Group Fields

Determines whether OnDemand maintains a copy of the folder fields for the selected user or group. When you select a user or group name and set User/Group Fields to Yes, OnDemand creates a copy of the folder fields for the user or group.

A user or group must be given Fields authority to make changes to the folder field information. Otherwise, a user with the administrator authority must customize the field information for the user or group.

When you select the Fields check box, OnDemand automatically sets User/Group Fields to Yes and selects the Access check box if it is not already selected.

## Maximum Hits

Determines the maximum number of items that OnDemand displays in the document list, regardless of the number of items that match a query. By default, OnDemand lists items in the order that they were loaded into the database.

The default value, -1 (minus one), means that OnDemand displays all of the items that match a query.



**Note:** The CICS/ESA client program displays a maximum of 200 items in the document list, even if you enter a larger value in the Maximum Hits field.

---

## Field Definition page

The Field Definition page is where you define the search and display fields for the folder and select a field type and mapping type for each field.

Define all of the fields required for the folder before you add the folder. After you add the folder, you cannot add (or remove) fields.

### Name

- A folder field name can be a maximum of 60 characters, including embedded blanks.
- The name cannot include the: ' (apostrophe), : (colon), % (percent), and \_ (underscore) characters.
- A folder field name can be mixed case.
- The field name must be unique to the folder.

### Description

Enter up to 120 characters of descriptive information about the folder field in the Description field.

### Field Type

The data type of the field. The types are Small Integer, Integer, Decimal, String, Date, Time, Date/Time, Date/Time (TZ), Application Group, Segment, and Text Search. Table 25 provides more information about the folder field data types.

Table 25. Folder Field Data Types

Field Type	Field Size	Description
Small Integer	2 bytes	Contains whole numbers between -32,767 and 32,767.
Integer	4 bytes	Contains whole numbers between -2147483648 and 2147483647. Integer fields require more space to store in the database than small integer fields.
Decimal	8 bytes	Contains numbers between $-10^{307}$ and $10^{308}$ with up to 15 significant digits.  You can store money values in a decimal field. Use the precision attribute to format the decimal places.
String	1—254	Contains letters, numbers, special symbols, such as the % and #, and any other printable character.

Table 25. Folder Field Data Types (continued)

Field Type	Field Size	Description
Date	2 bytes	Contains any valid date that occurs from January 1, 1970 to September 17, 2059. If you need to index report files with dates that occur before January 1, 1970, you must define the date as a String field. OnDemand validity checks all dates.
Time	2 bytes	Contains times of day, stored in three second increments, since midnight, and limited to 24 hours.
Date/Time	4 bytes	Contains both a date and time value. The date can be from January 1, 1970 to January 1, 2038. The time value is stored in one second increments.
Date/Time (TZ)	4 bytes	Contains both a date and time value. A Date/Time (TZ) field is like a Date/Time field, but uses the time zone set by the time zone variable on the client PC. You must make sure that the time zone variable is set whenever the PC is restarted.
Application Group	N/A	For a search field, contains a list of application groups referenced by the folder. For a display field, lists the name of the application group where OnDemand retrieved the item. You can define one application group field per folder.
Segment	N/A	Contains a list of segment tables for an application group. Each item in the list represents a different segment of application group data. You can define one segment field per folder.
Text Search	1-254	Used to search a document for the specified string before transferring the document to the client. You can define one text search field per folder.

## Mapping Type

The mapping type determines the number of application group fields that you can map to the folder field and the type of queries that the field supports.

- **Single.** You can map the folder field to one field in each application group referenced by the folder. The valid search operators for a field that uses the Single mapping type depends on the field type.

If the Field Type is Application Group, Segment, or Text Search, OnDemand automatically sets the Mapping Type to Single.

- **Range.** You can map the folder field to two fields in each application group referenced by the folder. The valid search operator for a field that uses the Range mapping type is Equal.

You can use the Range mapping type to create a *transaction* search field. For example, assume the reports that you want to query contain thousands of records, each indexed using a unique, sorted value, such as an invoice number. The Range mapping type allows users to locate a specific record

(transaction) in the report. OnDemand queries the database by comparing the search value entered by the user to two database fields, one for the beginning value and one for the ending value. If the search value falls within the range of both database fields, OnDemand adds the item to the document list.

- Operator Or. You can map the folder field to two fields in each application group referenced by the folder. The valid search operators for a field that uses the Operator Or mapping type depends on the field type. However, Between and Not Between are not supported.

You can use the Operator Or mapping type to create an *either/or* search field. For example, assume the reports that you want to query can contain a major and minor account number. The Operator Or mapping type allows users to locate items that contain either account number. OnDemand queries the database by comparing the search value entered by the user to two database fields. If either database field contains the search value, OnDemand adds the item to the document list.

---

## Field Information page

The information on the Field Information page applies to the field listed in the Name field. Select a field name from the Name list to specify field information for the field.

The ID field contains \*FOLDER and a list of users and groups added to the folder on the Permission page and given the User/Group Fields permission.

- \*FOLDER is used to specify information about fields at the folder level. Folder-level field information applies to all groups and users not provided specific field information. To specify field information at the folder level, first select \*FOLDER from the ID list. Then select the field name from the Name list. Make changes to the field information. You can specify field information for zero or more fields at the folder level.
- To specify field information for a group, first select the group name from the ID list. Then select the field name from the Name list. Make changes to the field information. You can specify field information for zero or more fields at the group level. Every user assigned to the group obtains the field information that you define for the group. The + (plus) character before a name in the ID list shows a group name. Field information at the group level overrides any field information specified at the folder level.
- To specify field information for a user, first select the user name from the ID list. Then select the field name from the Name list. Make changes to the field information. Field information at the user level overrides any field information specified at the group and folder levels.

## Query

Determines the order that the field appears in the search criteria area of the client program window. For example, with two folder fields, date and customer number, if you want the customer number to appear first in the search criteria, select 1 (one).

Select 0 (zero) and OnDemand does not display the field. That is, the field does not appear in the search criteria when the user opens the folder.

## Hit List

Determines the order that the field appears on the title bar of the document list. For example, with two folder fields, date and customer number, if you want the customer number to appear in the first column, select 1 (one).

Select 0 (zero) and OnDemand does not display the field. That is, the field does not appear in the document list.

## Sort

Determines whether OnDemand uses field values to sort items in the document list and if so, the field sort order.

Select a number greater than 0 (zero) to use field values to sort items and to designate the field sort order. For example, with two folder fields, date and customer number, to sort items in the document list by date within customer number, set the Sort value for the customer number field to 1 (one) and the Sort value for the date field to 2 (two).

The default value is 0 (zero), which means that OnDemand does not use the field values to sort items.

## Ascending

If the Sort field contains a number other than zero, determines how OnDemand sorts items. Select the Ascending check box to sort items from smallest to largest (first to last). Otherwise, OnDemand sorts items largest to smallest (last to first or descending).

## Operators

The Operators area identifies the default search operator for the field and the search operators available to users to construct queries (using field values). Search operators not valid for the field data type appear shaded (unavailable for selection). Table 26 on page 185 lists the search operators. Table 27 on page 185 lists the search operators available for each type of folder field.

Table 26. Folder Search Operators

Search Operator	Meaning
Equal	Search for the exact value specified.
Not Equal	Search for values that do not match the value specified.
Greater Than	Search for values greater than the value specified.
GT or Equal	Search for values greater than or equal to the value specified.
Less Than	Search for values less than the value specified.
LT or Equal To	Search for values less than or equal to the value specified.
In	Match a set. Match values that are part of the specified set. The blank character delimits sets of values.
Not In	Not matching a set. Match values that are not part of the specified set. The blank character delimits sets of values.
Between	Include. Search for values that occur within the specified lower and upper values.
Not Between	Exclude. Search for values that occur outside the specified lower and upper values.
Like	Similar; search for values that match the pattern specified. The blank character can be used as part of the pattern.
Not Like	Not similar; search for values that do not match the pattern specified. The blank character can be used as part of the pattern.

Table 27. Folder Search Operators by Field Data Type

Field Data Type	Operators Available
String	Equal, Not Equal, Less Than, LT or Equal, Greater Than, GT or Equal, In, Not In, Between, Not Between, Like, Not Like
Decimal, Integer, Small Integer	Equal, Not Equal, Less Than, LT or Equal, Greater Than, GT or Equal, In, Not In, Between, Not Between
Date, Time, Date/Time, Date/Time (TZ) fields not defined as a segment field	Equal, Not Equal, Less Than, LT or Equal, Greater Than, GT or Equal, Between, Not Between
Date, Time, Date/Time, Date/Time (TZ) fields defined as a segment field	Equal, Between
Application Group, Segment, Text Search	Equal

## Defaults

The Defaults area allows you to define default search values and set other attributes of the search fields. OnDemand uses the information you provide when a user opens the folder or chooses the Restore Defaults command.

To define default search values for a field you must select the Default check box.

### Defaults entry fields

Determines the default search value for the field. You can enter a maximum of 254 characters in the entry field. If the default operator for the field is Between, the first entry field contains the low value of a search range and the second entry field contains the high value of the search range.

For date and time fields, OnDemand uses the value of the Defaults Fmt field to validate the default values. For decimal fields, OnDemand uses the value of the Precision field to validate the default values.

### Fixed

Prevents the user from changing the default search value.

### Required

A search value for the field is required before OnDemand can query the database.

### View Title

Lists the field name on the title bar of the viewing window.

You can select the View Title check box for more than one field. If you do so, OnDemand client programs concatenate the fields, separating each field name with a blank character.

### Internal

Select the Internal check box to cause the client programs to display the database values in the search field, rather than the displayed values. Database and displayed values are defined on the Field Information page in the application group window.

## Minimum

For integer, decimal, date, and time fields, determines the minimum value that users can enter in the field.

For date and time fields, OnDemand uses the value of the Defaults Fmt field to validate the default values. For decimal fields, OnDemand uses the value of the Precision field to validate the default values.

## Maximum

For integer, decimal, date, and time fields, determines the maximum value that users can type in the field.

For date and time fields, OnDemand uses the value of the Defaults Fmt field to validate the default values. For decimal fields, OnDemand uses the value of the Precision field to validate the default values.

## Display Fmt

Determines the format that OnDemand uses to display date and time values in the document list. You can select a display format for Date, Time, Date/Time, and Date/Time (TZ) fields. Select a format from the list or type a format in the entry field, if the correct format is not available.

If you do not specify a format, OnDemand uses the default date and time format from the client operating environment. For example, the default date format in the US English version of Windows is **m/d/yy** (no leading zero for day and month). The default time format in the US English version of Windows is **h:mm:ss** (no leading zero for hours; 12 hour format).

Table 28 lists the date and time formats supplied by OnDemand. The format consists of a set of values (for example, **%m**) and separators. For example, **%d %B %Y** represents dates that appear in the format **31 January 1995**.

Table 28. Folder Date and Time Field Format Specifications

Date Format Specifier	Date Format	Example
%m/%d/%y	mm/dd/yy	01/31/95
%d/%m/%y	dd/mm/yy	31/01/95
%f/%e/%y	m/d/yy	1/31/95
%e/%f/%y	d/m/yy	31/1/95
%m-%d-%y	mm-dd-yy	01-31-95
%d-%m-%y	dd-mm-yy	31-01-95

Table 28. Folder Date and Time Field Format Specifications (continued)

Date Format Specifier	Date Format	Example
%m%d%y	mmddy	013195
%m%d%Y	mmddyyyy	01311995
%y%m%d	yymmdd	950131
m%d	yyymmdd	19950131
%b %e, %Y	Mth d, yyyy	Jan 31, 1995
%B %e, %Y	Month d, yyyy	January 31, 1995
%m/%d/%y %H:%M	mm/dd/yy hh:mm	01/31/95 10:50
%H:%M	hh:mm	10:50
%T	hh:mm:ss	10:50:59

## Defaults Fmt

The Defaults Fmt field determines the format that OnDemand uses to validate date and time values in the Defaults, Minimum, and Maximum fields. OnDemand client programs also use the format that you specify to display default date and time values in search fields when a user opens the folder or chooses the Restore Defaults command. You can specify the format for Date, Time, Date/Time, and Date/Time (TZ) fields. Select a format from the list or type a format in the entry field, if the correct format is not available.

If you do not specify a format, OnDemand uses the default date and time format from the client operating environment. For example, the default date format in the US English version of Windows is **m/d/yy** (no leading zero for day and month). The default time format in the US English version of Windows is **h:mm:ss** (no leading zero for hours; 12 hour format).

Table 28 on page 187 describes the format specifiers supplied by OnDemand.

## Interval

You can define a search interval for date and time fields by making choices and entering a value in the Interval area. OnDemand uses the information that you specify to compute the search interval. OnDemand places the appropriate values in the search field when users open the folder or choose the Restore Defaults command.

For example, suppose you complete the Interval group by selecting Last, entering 90 in the entry field, and selecting Days. Further, assume that the default search operator for the field is Between and %B %e, %Y is the default



format. When a user opens the folder on December 13, 1995, OnDemand automatically sets the following search criteria for the field:

Between September 14, 1995 and December 13, 1995

To define a search interval:

1. In the Defaults group, select the Default check box.
2. Set the interval direction. In the Interval group, choose **Next**, to define an interval that starts with the current system date or time and searches forward in time. Choose **Last** to define an interval that starts with the current system date or time and searches backward in time.
3. Enter the interval value. In the Interval field, type a whole number greater than or equal to zero. The interval value is the number of days, months, or years or hours, minutes, or seconds used to compute the interval. For example, the interval value 60 and the interval extent Days defines a search range of 60 days.
4. Set the interval extent. The extent determines the span of time that OnDemand uses to compute the search interval. Choose from Days, Months, or Years or Hours, Minutes, or Seconds. For example, the interval value 12 and the interval extent Hours defines a search range of 12 hours.

## Wild Card

For a string field, determines whether OnDemand uses wild card characters with a search value, and if so, how OnDemand processes the wild card characters.

You can select Append, Prepend, and both Append and Prepend. You can also clear both Append and Prepend.

- Append. The default option. When you select Append, OnDemand automatically adds a wild card character to the end of the search string. For example, suppose you use the LIKE operator to search a name field for the string "Clark". OnDemand uses LIKE 'Clark%' to locate all names that begin with the letters "Clark" followed by zero or more characters (Clark, Clarke, Clarkes, Clarksen, and so forth).

When searching database fields with the LIKE and NOT LIKE operators, we recommend that you always append a wild card to the search string. Otherwise, queries may not produce the results you expect. For example, suppose you define a database field as a fixed length string, twenty bytes in length. All values in the database must contain twenty characters. When loading data, if an index value contains less than twenty characters, OnDemand adds one or more blank characters to fill the database field. For example, if the index value is "Clark", OnDemand stores "Clark " in the database (the letters "Clark" followed by fifteen blank characters). Suppose you search this field with the LIKE

operator and the search value “Clark”. If you clear the Append check box, OnDemand will not find a match because the blank characters are part of the field value in the database. The correct way to match specified portions of character strings is to use the LIKE and NOT LIKE operators with wild card characters. If you clear the Append check box and the user does not add a wild card character to the search string, OnDemand locates only those items that match the search string exactly.

- Prepend. When you select the Prepend check box, OnDemand automatically adds a wild card character to the beginning of the search string. For example, For example, suppose you use the LIKE operator to search a name field for the string “ark”. OnDemand uses LIKE '%ark' to locate all names that end with the letters “ark” preceded by zero or more characters (Bark, Clark, Denmark, and so forth).

Use caution when you prepend a wild card character. If a wild card character begins the search string, OnDemand must perform a sequential search of the entire database even though there may be database fields in the application group defined as index fields.

- Select Append and Prepend, if you want OnDemand to add a wild card to the end of the search string and the beginning of the search string. For example, suppose you use the LIKE operator to search a name field for the string “ark”. OnDemand uses LIKE '%ark%' to locate all names that contain the letters “ark” (Clark, Denmark, and so forth).
- If you clear the Append and Prepend check boxes, OnDemand does not automatically add wild card characters to the search string. If the user does not add a wild card character to the search string, OnDemand locates only those items that match the search string exactly.

## Precision

The number of digits to the right of the decimal point. The default value is 2 (two). The maximum precision is 15 (fifteen).

For decimal fields that contain money values, set the precision at 2 (two) digits.

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## Field Mapping page

The Field Mapping page is where you map folder fields to database fields for the application groups added to the folder.

If the folder field mapping type is Range or Operator Or, you must map the folder field to a second application group database field.

If the folder field mapping type is Range or Operator Or, you can map the folder field to two fields in one or more of the application groups added to the folder.

**Name**

A list of the folder fields.

**Application Group Fields**

A list of the database field names for the application groups added to the folder.

**Mapped Folder Fields**

A list of the folder and application group field mappings.



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## Glossary

This glossary includes definitions from the following sources:

- Definitions reprinted from the *American National Dictionary for Information Processing Systems*, copyright 1982 by the Computer Business Equipment Manufacturers Association (CBEMA), are identified by the symbol (A) following the definition. Copies can be purchased from the American Standards Institute, 1430 Broadway, New York, New York 10018.
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- Definitions are also reprinted from the *CCITT Eighth Plenary Assembly Red Book, Terms and Definitions* and working documents published by the International Telegraph and Telephone Consultative Committee of the International Telecommunication Union, Geneva, 1985.

- Definitions that are specific to IBM products are so labeled, for example, "In OnDemand," or "In MVS."

The following cross references are used in this glossary:

**Contrast with.** This refers to a term that has an opposed or substantively different meaning.

**Synonym for.** This indicates that the term has the same meaning as a preferred term, which is defined in its proper place in the dictionary.

**Synonymous with.** This is a backward reference from a defined term to all other terms that have the same meaning.

**See.** This refers the reader to multiple-word terms that have the same last word.

**See also.** This refers the reader to terms that have a related, but not synonymous, meaning.

## A

**access.** To obtain data from or to put data in storage.

**ACIF.** See Advanced Function Presentation Conversion and Indexing Facility.

**Acrobat.** The Adobe viewer for PDF files. Acrobat is similar to the IBM AFP Workbench, that is, a stand-alone viewer. Acrobat also supports a robust set of APIs. It is through these APIs that Acrobat is integrated with the OnDemand client program.

**active log file.** The subset of files consisting of primary log files and secondary log files that are currently needed by the database manager for rollbacks and recovery.

**active policy set.** In ADSM, the policy set within the policy domain that contains the most

recently activated policy currently in use by all client nodes that have been assigned to that policy domain. See Policy Set.

**adapter.** A part that electrically or physically connects a device to a computer or to another device.

**addressable point.** Any point in a presentation surface that can be identified by a coordinate from the coordinate system of the presentation medium. See also Pel.

**administrative client.** In ADSM, the program that allows administrators to control and monitor the server through administrator commands.

**administrator interface.** The program that provides administrators with functions to manage OnDemand groups, users, printers, applications, application groups, storage sets, and folders.

**ADSM.** See ADSTAR Distributed Storage Manager.

**ADSTAR Distributed Storage Manager.** A program that provides storage management for archived files.

**Advanced Function Presentation (AFP).** A set of licensed programs that use the all-points-addressable concept to print data on a wide variety of printers or display data on a variety of display devices. AFP also includes creating, formatting, archiving, viewing, retrieving, and distributing information.

**Advanced Function Presentation Application Programming Interface (AFP API).** An AFP program shipped with PSF/MVS 2.1.1 and PSF/VM 2.1.1 that creates the AFP data stream from the COBOL and PL/1 high-level programming languages.

**Advanced Function Presentation Conversion and Indexing Facility.** An AFP program shipped with OnDemand that you can use to convert a print file into a MO:DCA-P document, to retrieve resources used by the document, and to index the file for later retrieval and viewing.

**Advanced Function Presentation data stream (AFP data stream).** A presentation data stream that is processed in the AFP environment. MO:DCA-P is the strategic AFP interchange data stream. IPDS is the strategic AFP printer data stream.

**AFP.** See Advanced Function Presentation.

**AFP API.** See Advanced Function Presentation Application Programming Interface.

**AFPDS.** A term formerly used to identify the composed page, MO:DCA-P-based data stream interchanged in AFP environments.

**AIX.** (1) Advanced Interactive Executive. (2) IBM's version of the UNIX operating system.

**AIX Acrobat Libraries.** A subset of the Acrobat Libraries ported to AIX for use by OnDemand.

**AIX Version 4 for RISC System/6000.** The operating system for the RISC System/6000 system that exists between the hardware and the application programs.

**AIXwindows Environment for RISC SYSTEM/6000.** A software graphical user interface environment based on OSF/MOTIF consisting of the AIXwindows toolkit, graphics libraries, window manager, and desktop running on top of a compatible operating system.

**all-points-addressable (APA).** The capability to address, reference, and position data elements at any addressable position in a presentation space or on a physical medium. An example of all points addressability is the positioning of text, graphics, and images at any addressable point on the physical medium. See also Picture Element.

**all-points-addressable mode.** Synonym for Page Mode.

**alphabetic character.** A letter or other symbol, excluding digits, used in a language. Usually the uppercase and lowercase letters A through Z plus other special symbols (such as \$ and \_) allowed by a particular language. See also Alphanumeric Character.

**alphanumeric character.** Consisting of letters, numbers, and often other symbols, such as punctuation marks and mathematical symbols. See also Alphabetic Character.

**alphanumeric string.** A sequence of characters consisting solely of the letters a through z and the numerals 0 through 9.

**American National Standards Institute (ANSI).** An organization for the purpose of establishing voluntary industry standards.

**anchor point.** The point in a document that signals to ACIF the beginning of a group of pages, after which it adds indexing structured fields to delineate this group.

**ANSI.** American National Standards Institute.

**ANSI carriage control character.** A character that specifies that a write, space, or skip operation should be performed before printing the line containing the carriage control. ANSI carriage control characters are encoded in ASCII or EBCDIC.

**APA.** All points addressable.

**API.** Application Program Interface.

**application.** In OnDemand, a definition of the attributes of a report, such as the data format and the compressing method. An application is defined for each output print data stream to be stored in OnDemand.

**application group.** One or more OnDemand applications with common indexing and storage management attributes, for example, invoice number and life of the data in OnDemand.

**Application Program Interface (API).** A formally defined programming language interface that is between a program and the user of a program.

**archive copy group.** In ADSM, a policy object containing attributes that control the generation, destination, and expiration of archive files. An archive copy group belongs to a management class.

**archive log file.** The subject of files consisting of primary log files and secondary log files that are no longer needed for normal database processing.

**archive media.** Devices and volumes used to store long-term copies of reports. For example, an optical storage library is one type of archive media supported by OnDemand.

**ASCII (American Standard Code for Information Interchange).** The standard code, using a coded character set consisting of 7-bit coded characters (8-bits including parity check), that is used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters. (A)

**attachment.** A device or feature attached to a processing unit, including required adapters. Contrast with Adapter.

**authentication.** In ADSM, the process of checking a user's password before allowing that user access to the server.

**authorize.** (1) To grant to a user the right to communicate with or make use of a computer system or display station. (2) To give a user either complete or restricted access to an object, resource, or function.

## B

**backend.** In the AIX operating system, the program that sends output to a particular device. Synonymous with Backend Program.

**backend program.** Synonym for Backend.

**bitmap.** A file that contains a bit-mapped graphic.

**BMP.** Bitmap.

**byte.** The amount of storage required to represent 1 character; a byte is 8 bits.

## C

**cache.** Short-term, magnetic storage. OnDemand loads the most recent and frequently used versions of reports and documents in the cache.

**carriage control character.** The first character of an output record (line) that is to be printed; it determines how many lines should be skipped before the next line is printed.

**case-sensitive.** Able to distinguish between uppercase and lowercase letters.

**CCITT.** Consultative Committee on International Telegraphy and Telephone.

**CD-ROM.** Compact disc read-only memory.

**channel.** A device connecting the processor to input and output devices.

**channel adapter.** A communication controller hardware unit used to attach the controller to a System/370 data channel.

**channel-attached.** (1) Pertaining to devices attached to a controlling unit by cables, rather than by telecommunication lines. (2) Synonymous with Local.

**character.** A letter, digit, or other symbol representing, organizing, or controlling data.

**character rotation.** The alignment of a character with respect to its character baseline, measured in degrees in a clockwise direction. Examples are 0°, 90°, 180°, and 270°. Zero-degree character rotation exists when a character is in its customary alignment with the baseline.

**character set.** A group of characters used for a specific reason; for example, the set of characters a printer can print or a keyboard can support.

**click.** To press the left mouse button while pointing to an object such as a command button or a toolbar button.

**client.** (1) In a distributed file system environment, a system that is dependent on a server to provide it with programs or access to

programs. (2) A personal computer connected to a network running OnDemand software that can query the OnDemand database, retrieve items from OnDemand, and view and print items.

**client domain.** The set of optical drives and storage volumes used by ADSM to store report files and resources belonging to an application group.

**client node.** An application group that has been registered to the ADSM server.

**COBOL.** Common business-oriented language. A high-level programming language, based on English, that is used primarily for business applications.

**code page.** An ordered set of up to 256 predefined display symbols. The first 32 code points of each code page are reserved for control codes and are the same for all code pages, leaving up to 224 distinct display symbols per page.

**Code Page Global Identifier (CPGID).** A unique code page identifier that can be expressed as either a two-byte binary or a five-digit decimal value.

**code point.** A character within a code page.

**coded font.** An AFP font that associates a code page and a font character set.

**command.** A request to perform an operation or run a program. When parameters values, flags, or other operands are associated with a command, the resulting character string is a single command.

**command line.** The area of the screen where commands are displayed as they are typed.

**communication method.** The method used by OnDemand and ADSM for exchanging information.

**communication protocol.** A set of defined interfaces that allow computers to communicate with each other.



**compact disc read-only memory (CD-ROM).**

High capacity read-only memory in the form of an optically read compact disk.

**composed page.** In Advanced Function Presentation, a page that can be printed only on an all-points-addressable output medium. It may contain composed text and raster images.

**composed-text data file.** A file containing text data and text control information that dictates the format, placement, and appearance of the data to be printed.

**compression.** A technique for removing strings of duplicate characters, gaps, empty fields, and trailing blanks before transmitting data.

**concatenate.** (1) To link together. (2) To join two character strings.

**concatenated field.** Two or more fields from a physical file record format that have been combined to make one field in a logical file record format.

**conditional processing.** A page definition function that allows input data records to partially control their own formatting.

**configuration.** The process of describing to a system the devices, optional features, and program products that have been installed so that these features can be used. Contrast with Customization.

**configuration file.** A file that specifies the characteristics of a system or subsystem; for example, the operating system queueing system.

**configure.** To describe to a system the devices, optional features, and licensed programs installed on a system.

**console.** The main operating system display station.

**constant.** A data item with a value that does not change during the running of a program. Contrast with Variable.

**Consultative Committee on International Telegraphy and Telephone (CCITT).** A United Nations Specialized Standards group whose membership includes common carriers concerned with devising and proposing recommendations for international telecommunications representing alphabets, graphics, control information, and other fundamental information interchange issues.

**control character.** A character that is not a graphic character such as a letter, number, or punctuation mark. Such characters are called control characters because they frequently act to control a peripheral device.

**controller.** A device that coordinates and controls the operation of one or more input/output devices, such as workstations, and synchronizes the operation of the system as a whole.

**conversion.** In programming languages, the transformation between values that represent the same data item but belong to different data types.

**copies.** See Copy Group.

**copy group.** In ADSM, a policy object that contains attributes that control the generation, destination, and expiration of backup and archive files. There are two kinds of copy groups: backup and archive. Copy groups belong to management classes.

**copy storage pool.** A named collection of storage volumes that contains copies of files that reside in primary storage pools. Copy storage pools are used to back up the data stored in primary storage pools.

**CPGID.** Code Page Global Identifier

**customization.** The process of describing optional changes to defaults of a software program that is already installed on the system and configured so that it can be used. Contrast with Configuration.

**customize.** To describe the system, the devices, programs, users, and user defaults for a particular data processing system or network. Contrast with Configure.

## D

**daemon.** In the AIX operating system, a process begun by the root user or by the root shell that can be stopped only by the root user. Daemon processes generally provide services that must be available at all times, such as sending data to the printer. A daemon runs continuously, looking for work to do, performing that work, and waiting for more work. A daemon does not have a controlling terminal associated with it. The OnDemand data download program (arsjesd) is an example of a daemon.

**data set.** Synonym for File.

**data stream.** A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form using a defined format.

**data transfer.** The movement, or copying, of data from one location and the storage of the data at another location.

**data type.** The type, format, or classification of a data object.

**database.** (1) The collection of information about all objects managed by OnDemand, including groups, users, printers, application groups, storage sets, applications, and folders. (2) The collection of information about all objects managed by ADSM, including policy management objects, administrators, and client nodes.

**Database Managed Space (DMS).** A type of DB2 table space. A DMS table space is managed by the database manager.

**DCF.** Document Composition Facility.

**decimal.** Pertaining to a system of numbers to the base 10. The decimal digits range from 0 through 9.

**decompression.** A function that expands data to the length that preceded data compression. See also Compression.

**default.** A value, attribute, or option that is assumed when no alternative is specified by the user.

**default directory.** The directory name supplied by the operating system if none is specified.

**default printer.** A printer that accepts all the printed output from a display station assigned to it.

**default value.** A value stored in the system that is used when no other value is specified. See also Default.

**desktop printer.** In this publication, an IBM LaserPrinter 4019 or 4029, or compatible printer.

**device class.** A named group of ADSM storage devices. Each device class has a unique name and represents a device type of disk, tape, or optical disk.

**device driver.** A program that operates a specific device, such as a printer, disk drive, or display.

**device type.** A type of ADSM storage device. Each device class must be categorized with one of the following devices types: disk, tape, or optical disk.

**device-independent.** Pertaining to a function that can be accomplished without regard for the characteristics of particular types of devices.

**dialog box.** An application window on the display that requests information from the user.

**directory.** (1) A type of file containing the names and controlling information for other files or directories. (2) A listing of related files arranged in a useful hierarchy.

**disk operating system (DOS).** An operating system for computer systems that use disks and diskettes for auxiliary storage of programs and data.

**Distiller.** A batch utility that converts PostScript files to PDF files. The distiller runs under AIX, Macintosh, Windows 3.1 or later, Windows 95, and Windows NT.

**DMS.** Database Managed Space.

**document.** (1) In OnDemand, a logical section of a larger file, such as an individual invoice within a report file of thousands of invoices. A document can also represent a 100 page segment of a file. (2) A file containing an AFP data stream document. An AFP data stream document is bounded by Begin Document and End Document structured fields and can be created using a text formatter such as Document Composition Facility (DCF).

**Document Composition Facility.** An IBM licensed program used to prepare printed documents.

**domain.** See Policy Domain or Client Domain.

**DOS.** Disk operating system.

**double-click.** To rapidly press the left mouse button twice while pointing to an object.

**download.** To transfer data from one computer for use on another one. Typically, users download from a larger computer to a diskette or fixed disk on a smaller computer or from a system unit to an adapter.

**drag.** To hold down the left mouse button while moving the mouse.

**driver.** The end of a stream closest to an external interface. The principal functions of the driver are handling any associated device, and transforming data and information between the external device and stream.

## E

**EBCDIC.** Extended Binary-Coded Decimal Interchange Code. This is the default type of data encoding in an MVS environment. Contrast with ASCII.

**enqueue.** To place items in a queue.

**enter.** (1) An instruction to type specific information using the keyboard. (2) A keyboard key that, when pressed, confirms or initiates the selected command.

**environment variable.** A variable that is included in the current software environment and is therefore available to any called program that requests it.

**error condition.** The state that results from an attempt to run instructions in a computer program that are not valid or that operate on data that is not valid.

**error log.** A file in a product or system where error information is stored for later access.

**error log entry.** In AIX, a record in the system error log describing a hardware or software failure and containing failure data captured at the time of the failure.

**error message.** An indication that an error has been detected. (A)

**error recovery.** The process of correcting or bypassing the effects of a fault to restore a computer system to a prescribed condition. (T)

**error type.** Identifies whether an error log entry is for a permanent failure, temporary failure, performance degradation, impending loss of availability, or undetermined failure.

**Ethernet.** A 10-megabit baseband local area network using CSMA/CD (carrier sense multiple access with collision detection). The network allows multiple stations to access the medium at will without prior coordination, avoids contention by using carrier sense and deference, and resolves contention by using collision detection and transmission.

**exit program.** A user-written program that is given control during operation of a system function.

**exit routine.** A routine that receives control when a specified event occurs, such as an error.

**expiration.** The process of deleting index data and reports based on application configuration information. The OnDemand database and storage managers perform expiration processing to remove reports and documents that are no longer needed from storage volumes and reclaim the space.

**Extended Binary-Coded Decimal Interchange Code (EBCDIC).** A coded character set consisting of eight-bit coded characters.

**external library resource (member).** Objects that can be used by other program products while running print jobs; for example, coded fonts, code pages, font character sets, form definitions, page definitions, and page segments. Synonym for Resource Object.

**external object.** Synonym for Resource Object.

## F

**FCB.** Forms control buffer.

**field.** A specified area in a record used for a particular type of data; for example, a group of characters that represent a customer's name.

**file.** (1) A named set of records stored or processed as a unit. (T) (2) The major unit of data storage and retrieval. A file consists of a collection of data in one of several prescribed arrangements and described by control information to which the operating system has access.

**file system.** The collection of files and file management structures on a physical or logical mass storage device, such as a diskette or a minidisk.

**file transfer.** In remote communications, the transfer of a file or files from one system to another over a communications link.

**File Transfer Protocol (FTP).** In TCP/IP, the protocol that makes it possible to transfer data among hosts and to use foreign hosts indirectly.

**fixed disk.** A flat, circular, nonremovable plate with a magnetizable surface layer on which data can be stored by magnetic recording. A rigid magnetic disk.

**fixed-disk drive.** The mechanism used to read and write information on a fixed disk.

**folder.** In OnDemand, the end-user view of data archived in one or more application groups. Folders provide end-users a convenient way to find related information, regardless of the source of the information or how the data was prepared.

**font.** (1) A family of characters of a given size and style, for example 9-point Helvetica. (2) A set of characters in a particular style. See Raster Font.

**font character set.** Part of an AFP font that contains the raster patterns, identifiers, and descriptions of characters. Often synonymous with Character Set. See also Coded Font.

**form definition (FORMDEF).** A form definition is a resource used by OnDemand. A form definition specifies the number of copies to be printed, whether the sheet should be printed on both sides, the position of a page of data on the sheet, text suppression, and overlays to be used (if any). Synonymous with FORMDEF.

**FORMDEF.** See Form Definition.

**FSA.** Functional SubSystem Application. A collection of programs residing in the FSS address space that control a device.

**FSI.** Functional SubSystem Interface. An MVS interface that allows communication between JES and a FSS and FSS applications. MVS Download uses an FSI to communicate with MVS and JES to process spool datasets created by application programs.

**FSS.** Functional SubSystem. An MVS subsystem comprised of programs residing in the same address space that provide JES-related functions. For example, a print programs that extend the scope of JES processing could be defined as a FSS.

**FTP.** File Transfer Protocol.

## G

**GB.** Gigabyte.

**GIF.** Graphic Interchange Format.

**gigabyte.** A unit of memory or space measurement equal to approximately one billion bytes. One gigabyte equals 1,000 megabytes.

**graphic.** A symbol produced by a process such as handwriting, drawing, or printing. (I) (A)

**graphic character.** A character that can be displayed or printed.

**Graphical User Interface.** A type of user interface that takes advantage of a high-resolution monitor, including some combination of graphics, the use of pointing devices, menu bars, overlapping windows, and icons.

**graphics.** A type of data created from such fundamental drawing units such as lines, curves, polygons, and so forth.

**Graphic Interchange Format (GIF).** A bit-mapped color graphics file format for IBM and IBM-compatible computers. GIF employs an efficient compression technique for high resolution graphics.

**group.** (1) A named collection of sequential pages that form a logical subset of a document. (2) A named collection of users assigned a specific role or belonging to a specific department.

**GUI.** Graphical user interface.

## H

**hardware.** The physical equipment of computing and computer-directed activities. The physical components of a computer system. Contrast with Software.

**help.** One or more files of information that describe how to use application software or how to perform a system function.

**hex.** See Hexadecimal.

**hexadecimal (hex).** Pertaining to a system of numbers in the base sixteen; hexadecimal digits range from 0 (zero) through 9 (nine) and A (ten) through F (fifteen).

**host.** (1) The primary or controlling computer in the communications network. (2) See Host System.

**host-based computer.** (1) In a computer network a computer that provides end users with services such as computation and data bases and that usually performs network control functions. (T) (2) The primary or controlling computer in a multiple-computer installation.

**host system.** (1) The controlling or highest level system in a data communication configuration, for example, a System/370 is the host system for the workstations connected to it. (2) In TCP/IP, a computer that is a peer system in a network.

## I

**icon.** A 32 by 32 pixel bitmap used by the windows manager to represent an application or other window.

**iFOR/LS.** Information for Operation and Retrieval/License System

**image.** (1) An electronic representation of a picture produced by means of sensing light, sound, electron radiation, or other emanations coming from the picture or reflected by the picture. An image can also be generated directly by software without reference to an existing picture. (2) An electronic representation of an original document recorded by a scanning device.

**index.** (1) A process of segmenting a print file into uniquely identifiable groups of pages (a named collection of sequential pages) for later retrieval. (2) A process of matching reference

points within a file and creating structured field tags within the MO:DCA-P document and the separate index object file.

**index object file.** An index-information file created by the OnDemand Conversion and Indexing Facility that contains the Index Element (IEL) structured fields, which identify the location of tagged groups in the AFP file. The indexing tags are contained in the Tagged Logical Element (TLE) structured fields.

**indexing.** (1) A process of segmenting a print file into uniquely identifiable groups of pages (a named collection of sequential pages) for later retrieval. (2) In ACIF, a process of matching reference points within a file and creating structured field tags within the MO:DCA-P document and the separate index object file.

**indexing with data values.** Adding indexing tags to a MO:DCA-P document using data that is already in the document and that is consistently located in the same place in each group of pages.

**indexing with literal values.** Adding indexing tags to a MO:DCA-P document by assigning literal values as indexing tags, because the document is not organized such that common data is located consistently throughout the document.

**InfoExplorer.** In the AIX operating system, the program that displays online documentation.

**Information for Operation and Retrieval/License System (iFOR/LS).** A network license system that controls the use of OnDemand software.

**informational message.** (1) A message that provides information to the end-user or system administrator but does not require a response. (2) A message that is not the result of an error condition.

**input file.** A file opened in order to allow records to be read.

**install.** (1) To add a program, program option, or software program to the system in a manner such that it may be executed and will interact

properly with all affected programs in the system. (2) To connect a piece of hardware to the processor.

**intelligent printer data stream (IPDS).** An all-points-addressable data stream that allows users to position text, images, and graphics at any defined point on a printed page.

**interface.** Hardware, software, or both, that links systems, programs, or devices.

**Internet.** A wide area network connecting thousands of disparate networks in industry, education, government, and research. The Internet network uses TCP/IP as the protocol for transmitting information.

**Internet Protocol (IP).** In TCP/IP, a protocol that routes data from its source to its destination in an Internet environment.

**IP.** Internet Protocol.

**IPDS.** Intelligent printer data stream.

## J

**job.** One or more related procedures or programs grouped into a procedure, identified by appropriate job control statements.

**job queue.** A list of jobs waiting to be processed by the system.

**Joint Photographic Experts Group (JPEG).** An image compression standard developed to handle larger images with many colors. JPEG uses a lossy algorithm, which means there is some loss of detail when saving and viewing images in this format. However, JPEG files can offer as much as 35% improvement in file size and compression.

**JPEG.** See Joint Photographic Experts Group.

## K

**kernel.** The part of an operating system that performs basic functions such as allocating hardware resources.

**kernel extension.** A program that modifies parts of the kernel that can be customized to provide additional services and calls. See Kernel.

**K-byte.** See Kilobyte.

**keyword.** Part of a command operand that consists of a specific character string.

**kilobyte (K-byte).** 1024 bytes in decimal notation when referring to memory capacity; in all other cases, it is defined as 1000.

## L

**LAN.** Local area network.

**LAN server.** A data station that provides services to other data stations on a local area network; for example, file server, print server, mail server. (T)

**laser printer.** A nonimpact printer that creates, by means of a laser beam directed on a photosensitive surface, a latent image which is then made visible by toner and transferred and fixed on paper. (T)

**Lempel Ziv Welsh (LZW).** A data compression algorithm. OnDemand uses the 16-bit version of LZW to compress data.

**library.** System storage for generated form definitions and page definitions.

**library resource (member).** A named collection of records or statements in a library.

**library resource name.** A name by which an object may be called from a library by Advanced Function Printing as part of a print job. Includes the 2-character prefix for the type of object, such as P1 for page definitions, F1 for form definitions, or O1 for overlays (also known as *resource name*).

**library server.** In OnDemand, the node in the TCP/IP network that contains the core OnDemand code and the OnDemand database.

**licensed program.** A separately priced program and its associated materials that bear a copyright

and are offered to customers under the terms and conditions of a licensing agreement.

**line data.** Data prepared for printing on a line printer, such as an IBM 3800 Model 1 Printing Subsystem. Line data is usually characterized by carriage-control characters and table reference characters.

**line-data print file.** A file that consists of line data, optionally supplemented by a limited set of structured fields.

**line printer.** A device that prints a line of characters as a unit. (I) (A) Contrast with Page Printer.

**literal.** (1) A symbol or a quantity in a source program that is itself data, rather than a reference to data. (2) A character string whose value is given by the characters themselves; for example, the numeric literal 7 has the value 7, and the character literal CHARACTERS has the value CHARACTERS.

**loading.** The process of archiving reports. During the data loading process, OnDemand programs process reports, create index data, and store report data and resources in cache storage and on archive media.

**local.** Pertaining to a device accessed directly without use of a telecommunication line.

**local area network (LAN).** (1) A computer network located on a user's premises within a limited geographical area. Communication within a local area network is not subject to external regulations; however, communication across the LAN boundary may be subject to some form of regulation. (2) A network in which a set of devices is connected to one another for communication and that can be connected to a larger network. See also Token-Ring Network.

**logical volume.** The combined space from all volumes defined to either the ADSM database or recovery log. The database resides on one logical volume and the recovery log resides on a different logical volume.

**log file.** A fixed-length file used to record changes to a database.

**LPD.** Line Printer Daemon. In TCP/IP, the command responsible for sending data from the spooling directory to a printer.

**LPR.** Line Printer Requestor. In TCP/IP, a client command that allows the local host to submit a file to be printed on a remote print server.

**LZW.** See Lempel Ziv Welsh.

## M

**M byte.** Megabyte.

**MB.** Megabyte.

**machine carriage control character.** A character that specifies that a write, space, or skip operation should be performed either immediately or after printing the line containing the carriage control.

**mainframe.** A large computer, particularly one to which other computers can be connected so that they can share facilities the mainframe provides. The term usually refers to hardware only.

**management class.** In ADSM, a policy object that is a named collection of copy groups. A management class can contain one backup copy group, one archive copy group, a backup and archive copy group, or zero copy groups. Users can bind each file to a management class to specify how the server should manage backup versions or archive copies of files. See Copy Group.

**mapping.** (1) A list that establishes a correspondence between items in two groups. (2) The process of linking database fields in an application group to folder search and display fields.

**megabyte (MB).** Loosely, one million bytes, when referring to memory or space capacity.

**memory.** Program-addressable memory from which instructions and other data can be loaded

directly into registers for subsequent running or processing. Memory is sometimes referred to as "storage".

**menu bar.** The area at the top of a window that contains choices that give a user access to actions available in that window.

**message.** Information from the system that informs the user of a condition that may affect further processing of a current program.

**migration.** (1) The process of moving data from one computer system to another without converting the data. (2) The process of moving report files, resources, and index data from cache storage to long-term (optical or tape) storage.

**mirroring.** In ADSM, a feature that protects against data loss with the database or recovery log by writing the same data to multiple disks at the same time. Mirroring supports up to three exact copies of each database or recovery log.

**Mixed Object Document Content Architecture - Presentation (MO:DCA-P).** (1) A strategic, architected, device-independent data stream for interchanging documents. (2) A printing data stream that is a subset of the Advanced Function Presentation data stream.

**MO:DCA-P.** Mixed Object: Document Content Architecture for Presentation

**mount.** To make a file system accessible.

**mouse.** A hand-held locator that a user operates by moving it on a flat surface. It allows the user to select objects and scroll the display screen by pressing buttons.

**MO:DCA-P.** Mixed Object Document Content Architecture and Presentation

**Multiple Virtual Storage (MVS).** Consists of MVS/System Product Version 1 and the MVS/370 Data Facility Product operating on a System/370 processor.

**MVS.** Multiple virtual storage; an IBM operating system.



## N

**network.** A collection of data processing products that are connected by communication lines for information exchange between locations.

**Network File System (NFS).** A protocol developed by Sun Microsystems that uses Internet Protocol to allow a set of cooperating computers to access each other's file system as if they were local.

**NFS.** Network File System.

**node.** A RS/6000 that operates as an OnDemand library server or object server and is connected to a TCP/IP network.

**notes.** Comments, clarifications, and reminders that can be attached to an OnDemand document.

**non-IPDS printer.** In this publication, a printer that is not channel-attached and which does not accept the Intelligent Printer Data Stream.

**numeric.** Pertaining to any of the digits 0 through 9.

## O

**object.** (1) A collection of structured fields. The first structured field provides a begin-object function and the last structured field provides an end-object function. The object may contain one or more other structured fields whose content consists of one or more data elements of a particular data type. An object may be assigned a name, which may be used to reference the object. Examples of objects are text, graphics, and image objects. (2) A resource or a sequence of structured fields contained within a larger entity, such as a page segment or a composed page. (3) A collection of data referred to by a single name.

**object server.** A storage manager node connected to a TCP/IP network that provides cache management and, optionally, support for files archived on optical and tape storage volumes.

**offset.** The number of measuring units from an arbitrary starting point in a record, area, or control block to some other point.

**online.** Being controlled directly by or directly communicating with the computer.

**operating environment.** (1) The physical environment; for example, temperature, humidity, and layout. (2) All of the basic functions and the user programs that can be executed by a store controller to enable the devices in the system to perform specific operations. (3) The collection of store controller data, user programs, lists, tables, control blocks, and files that reside in a subsystem store controller and control its operation.

**operating system.** Software that controls the running of programs and that also can provide such services as resource allocation, scheduling, input and output control, and data management.

**optical library.** A disk storage device that houses optical disk drives and optical disks, and contains a mechanism for moving optical disks between a storage area and optical disk drives.

**optimize.** To improve the speed of a program or to reduce the use of storage during processing.

**outline fonts.** (1) Fonts whose graphic character shapes are defined as mathematical equations rather than by raster patterns. (2) Fonts created in the format described in *Adobe Type 1 Font Format*, a publication available from Adobe Systems, Inc. Synonymous with Type 1 fonts.

**overlay.** A collection of predefined, constant data such as lines, shading, text, boxes, or logos, that is electronically composed and stored as an AFP resource file that can be merged with variable data on a page while printing or viewing.

## P

**page.** (1) A collection of data that can be printed on one side of a sheet of paper or a form. (2) The boundary for determining the limits of printing. See also Logical Page and Physical Page. (3) Part

of an AFP document bracketed by a pair of Begin Page and End Page structured fields.

**page definition.** A resource used by OnDemand that defines the rules of transforming line data into composed pages and text controls.

**page printer.** A device that prints one page as a unit. (I) (A) Contrast with Line Printer.

**page segment.** In Advanced Function Presentation, a resource that can contain text and images and can be positioned on any addressable point on a page or an electronic overlay.

**PAGEDEF.** Page definition

**parallel device.** A device that can perform two or more concurrent activities. Contrast with Serial Device.

**parameter.** (1) Information that the user supplies to a panel, command, or function. (2) In the AIX operating system, a keyword-value pair.

**partitioned data set.** A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data.

**path.** In a network, any route between any two nodes.

**path name.** A name that specifies the location of a directory within a file system. In the AIX file system, path names are used to locate and reference directories and their contents.

**PC.** Personal Computer.

**PCL.** Printer control language.

**PCX.** Picture Exchange Format.

**PDF.** See Portable Document Format.

**permissions.** Codes that determine how the file can be used by any users who work on the system.

**personal computer.** A microcomputer primarily intended for stand-alone use by an individual. (T)

**Picture Exchange Format (PCX).** A file that contains a graphic in the PCX graphics file format, which was originally developed for the PC Paintbrush program, but is now widely used by other programs.

**pioibe.** The printer input/output back end program used by AIX for printing tasks.

**pipe.** To direct the data so that the output from one process becomes the input to another process. The standard output of one command can be connected to the standard input of another with the pipe operator (|). Two commands connected in this way constitute a pipeline.

**point.** (1) To move the mouse pointer to a specific object. (2) A unit of typesetting measure equal to 0.01384 inch (0.35054 mm), or about 1/72 of an inch. There are 12 points per pica.

**point size.** The height of a font in points. See also Point.

**policy domain.** A policy object that contains policy sets, management classes, and copy groups that is used by a group of client nodes. See Policy Set, Management Class, Copy Group, and Client Node.

**policy set.** A policy object that contains a group of management class definitions that exist for a policy domain. At any one time, there can be many policy sets within a policy domain but only one policy set can be active. See Management Class and Active Policy Set.

**port.** (1) A part of the system unit or remote controller to which cables for external devices (display stations, terminals, or printers) are attached. The port is an access point for data entry or exit. (2) A specific communications end point within a host. A port is identified by a port number.

**Portable Document Format.** A distilled version of PostScript data that adds structure and efficiency. PDF data has the same imaging model as PostScript but does not have its programmability. PDF also provides direct access to pages and allows hypertext links, bookmarks,

and other navigational aids required for viewing. The text in a PDF file is usually compressed using LZW methods. The images in a PDF file are usually compressed using CCITT or JPEG methods.

**PostScript.** Adobe's page description language used for printing. PostScript is a very flexible programming language and imaging model but is not as structured as AFP. PostScript cannot be parsed to determine page boundaries, it must be interpreted. Because of this limitation, PostScript is not practical for archiving and viewing. Adobe created PDF for archiving and viewing.

**press.** To touch a specific key on the keyboard.

**primary log file.** A set of one or more log files used to record changes to a database. Storage for these files is allocated in advance.

**primary storage pool.** A named collection of storage volumes that ADSM uses to store archive copies of files.

**print file.** A file that a user wants to print.

**print job.** A series of print files scheduled for printing. At print submission time, the user can request one or more files to be printed; therefore, a print job consists of one or more print files.

**print queue.** A file containing a list of the names of files waiting to be printed.

**Print Services Facility (PSF).** A sophisticated IBM print subsystem that drives IPDS page printers. PSF is supported under MVS, VSE, VM, OS/2, AIX, and is a standard part of the operating system under OS/400. PSF manages printer resources such as fonts, images, electronic forms, form definitions, and page definitions, and provides error recovery for print jobs. When printing line data, PSF supports external formatting using page definitions and form definitions. This external formatting extends page printer functions such as electronic forms and use of typographic fonts without any change to applications that generate the data.

**Print Services Facility/2 (PSF/2).** PSF/2 is an OS/2-based print server that drives IPDS page

printers, as well as IBM PPDS and HP-PCL compatible printers. PSF/2 manages printer resources and provides error recovery for print jobs. PSF/2 supports distributed printing of AFP print jobs from PSF/6000, PSF/MVS, PSF/VSE, PSF/VM, and OS/400. PSF/2 also supports printing from a wide range of workstation applications, including Microsoft Windows and OS/2 Presentation Manager, as well as the ASCII, PostScript, and AFP data streams.

**Print Services Facility/6000 (PSF/6000).** An IBM licensed program that produces printer commands from the data sent to it and it runs on the AIX/6000 operating system.

**print spooler.** The print spooler directs the printing of data from different applications. It temporarily stores information in separate files until they are printed.

**Printer Control Language (PCL).** The data stream used by Hewlett-Packard LaserJet II and III and other compatible printers.

**process.** An activity within the system that is started, such as a command, a shell program, or another process.

**profile.** (1) A file containing customized settings for a system or user. (2) Data describing the significant features of a user, program, or device.

**program level.** The version, release, modification, and fix levels of a program.

**prompt.** A displayed symbol or message that requests information or operator action.

**protocol.** A set of semantic and syntactic rules that determines the behavior of functional units in achieving communication.

**PSF.** See Print Services Facility.

**PSF/2.** See Print Services Facility/2.

**PSF/6000.** See Print Services Facility/6000.

**PTF.** Program temporary fix.

## Q

**qdaemon.** The daemon process that maintains a list of outstanding jobs and sends them to the specified device at the appropriate time.

**qualified name.** (1) A data name explicitly accompanied by a specification of the class to which it belongs in a specified classification system. (I) (A) (2) A name that has been made unique by the addition of one or more qualifiers.

**queue.** (1) A line or list formed by items waiting to be processed. (2) To form or arrange in a queue.

**queue device.** A logical device defining characteristics of a physical device attached to a queue.

## R

**radio button.** Round option buttons grouped in dialog boxes; one is preselected. Like a radio in an automobile, select only one button ("station") at a time.

**RAM.** Random access memory. Specifically, the memory used for system memory. Sometimes this memory is referred to as main storage.

**raster.** In Advanced Function Presentation, an on/off pattern of electrostatic images produced by the laser print head under control of the character generator.

**raster font.** A font in which the characters are defined directly by the raster bit map. See Font. Contrast with Outline Font.

**raster graphics.** Computer graphics in which a display image is composed of an array of pixels arranged in rows and columns.

**read access.** In computer security, permission to read information.

**record.** (1) In programming languages, an aggregate that consists of data objects, possibly with different attributes, that usually have

identifiers attached to them. (2) A set of data treated as a unit. (3) A collection of fields treated as a unit.

**recovery log.** In ADSM, a log of updates that are about to be written to the database. The log can be used to recover from system and media failures.

**recovery procedure.** (1) An action performed by the operator when an error message appears on the display screen. This action usually permits the program to run the next job. (2) The method of returning the system to the point where a major system error occurred and running the recent critical jobs again.

**register.** Define an OnDemand storage node or ADSM administrator to ADSM.

**remote.** Pertaining to a system or device that is accessed through a communications line. Contrast with Local.

**remote print.** Issuing print jobs to one machine (client) to print on another machine (server) on a network.

**remote system.** A system that is connected to your system through a communication line.

**report file.** A print data stream produced by an application program that can contain hundreds or thousands of pages of related information. Some report files can be segmented into single and multiple page objects called documents.

**resolution.** (1) In computer graphics, a measure of the sharpness of an image, expressed as the number of lines and columns on the display screen. (2) The number of pels per unit of linear measure.

**resource.** A collection of printing instructions, and sometimes data to be printed, that consists entirely of structured fields. A resource can be stored as a member of a directory and can be called for by the Print Services Facility when needed. The different resources are: coded font, character set, code page, page segment, overlay, and form definition.

**resource directory.** A place in which resource files are stored.

**resource management.** The function that protects serially accessed resources from concurrent access by computing tasks.

**retention.** The amount of time, in days, that archived files will be retained in ADSM before they are deleted.

**retry.** To try the operation that caused the device error message again.

**return code.** (1) A value that is returned to a program to indicate the results of an operation issued by that program. (2) A code used to influence the running of succeeding instructions.

**RISC SYSTEM/6000.** A family of workstations and servers based on IBM's POWER architecture. They are primarily designed for running multi-user numerical computing applications that use the AIX operating system.

**root.** The user name for the system user with the most authority.

**root file system.** The file system that contains all the default installation and program directories in the system.

**root user.** In the AIX/6000 environments, an expert user who can log in and execute restricted commands, shut down the system, and edit or delete protected files.

**root volume group.** The volume group, identified with a single / (forward slash) that contains all the directories in the root file system.

**rotation.** (1) The alignment of a character with respect to its character baseline, measured in degrees in a clockwise rotation. Examples are 0°, 90°, 180°, and 270°. Zero-degree character rotation exists when a character is in its customary alignment with the baseline. Synonymous with Character Rotation. (2) The number of degrees a character is turned relative to the page coordinates. (3) The orientation of the characters of a font with respect to the baseline.

**routing.** The assignment of the path by which a message will reach its destination.

## S

**secondary log file.** A set of one or more log files used to record changes to a database. Storage for these files is allocated as needed when the primary log fills up.

**segment.** (1) A collection of composed text and images, prepared before formatting and included in a document when it is printed. See Page Segment. (2) The resource that contains the structured-field definition of a page segment. (3) A 100 page portion of a report file. OnDemand divides report files into segments to provide enhanced performance and maintenance.

**select.** To pick a menu command or other object with a single click of the mouse.

**serial device.** A device that performs functions sequentially, such as a serial printer that prints one byte at a time. Contrast with Parallel Device.

**server.** (1) On a network, the computer that contains the data or provides the facilities to be accessed by other computers on the network. (2) A program that handles protocol, queuing, routing, and other tasks necessary for data transfer between devices in a computer system. (3) A workstation connected to a TCP/IP network that runs the OnDemand programs that store, retrieve, and maintain report files. OnDemand supports two types of servers: a library server an object server.

**server options file.** The ADSM file that specifies processing options for communication methods, tape handling, pool sizes, language, and date, time, and number formats.

**shell.** In the AIX/6000 environment, a software interface between a user and the operating system of a computer. Shell programs interpret commands and user interactions on devices such as keyboards and pointing devices and communicate them to the operating system.

**skip-to-channel control.** A line printer control appearing in line data. Allows space to be left between print lines. Compatible with page printers when the data is formatted by page definitions.

**SMIT.** System Management Interface Tool.

**SMS.** System Managed Space.

**software.** Programs, procedures, rules, and any associated documentation pertaining to the operating of a system. Contrast with Hardware.

**spool file.** (1) A disk file containing output that has been saved for later printing. (2) Files used in the transmission of data among devices.

**spooling (simultaneous peripheral operation online).** Performing a peripheral operation such as printing while the computer is busy with other work.

**spooling subsystem.** A synonym for the queuing system that pertains to its use for queuing print jobs.

**stand-alone workstation.** A workstation that can perform tasks without being connected to other resources such as servers or host systems.

**standard input.** The primary source of data going into a command. Standard input comes from the keyboard unless redirection or piping is used, in which case standard input can be from a file or the output from another command.

**standard output.** The primary destination of data coming from a command. Standard output goes to the display unless redirection or piping is used, in which case standard output can be to a file or another command.

**status.** (1) The current condition or state of a program or device. For example, the status of a printer. (2) The condition of the hardware or software, usually represented in a status code.

**storage.** (1) The location of saved information. (2) In contrast to memory, the saving of information on physical devices such as disk or tape.

**storage device.** A functional unit for storing and retrieving data.

**storage hierarchy.** A logical ordering of storage devices. Generally, the ordering is based on the speed and capacity of the devices.

**storage node.** A named object that identifies an ADSM domain on an OnDemand object server. There are two types of storage nodes: a primary storage node and a secondary storage node. Application group data is archived in a primary storage node. A secondary storage node contains a backup copy of data stored in a primary node.

**storage object.** A portion of a storage volume managed as a single entity. A storage object can contain many report file segments.

**storage pool.** A named collection of storage volumes that is the destination for archived files.

**storage pool volume.** A volume that has been assigned to a storage pool to store archived files.

**storage set.** A named collection of storage nodes with the same storage management characteristics. For example, the life of the data in OnDemand.

**storage volume.** A disk volume that has been assigned to store reports and documents on the OnDemand server.

**string.** A series or set of alphabetic or numeric characters. A string can be composed of letters, numbers, and special characters.

**structure.** A variable that contains an ordered group of data objects. Unlike an array, the data objects within a structure can have varied data types.

**structured field.** (1) A self-identifying, variable-length, bounded record that can have a content portion that provides control information, data, or both. (2) A mechanism that permits variable length data to be encoded for transmission in the data stream. See Field.

**subdirectory.** In the file system hierarchy, a directory contained within another directory.

**subroutine.** (1) A sequenced set of statements or coded instructions that can be used in one or more computer programs and at one or more points in a computer program. (2) A routine that can be part of another routine.

**syntax.** The grammatical rules for constructing a command, statement, or program.

**syntax diagram.** A diagram for a command that displays how to enter the command on the command line.

**system console.** A console, usually equipped with a keyboard and display screen, that is used by an operator to control and communicate with a system. Synonymous with Console.

**system customization.** Specifying the devices, programs, and users for a particular data processing system. See also Configuration.

**system integrity.** In computer security, the quality of a system that can perform its intended function in an unimpaired manner, free from deliberate or inadvertent unauthorized manipulation of the system.

**System Managed Space (SMS).** A type of DB2 table space. A SMS table space is managed by the AIX filesystem manager.

**system management.** The tasks involved in maintaining the system in good working order and modifying the system to meet changing requirements.

**System Management Interface Tool (SMIT).** In the AIX operating system, a series of panels that allow you to perform functions without directly issuing any commands.

**system memory.** Synonymous with Main Storage, but used in hardware to refer to semiconductor memory (modules).

**system prompt.** Synonym for command line. The system prompt is the symbol that appears at the command line of an operating system. The system prompt indicates that the operating system is ready for the user to enter a command.

## T

**table.** A named collection of data consisting of rows and columns.

**table reference character (TRC).** (1) Usually, the second byte on a line in the user's data. This byte contains a value (0–126) that is used to select a font to be used to print that line. (2) In the 3800 Printing Subsystem, a numeric character (0, 1, 2, or 3) corresponding to the order in which the character arrangement table names have been specified with the **CHARS** keyword. It is used for selection of a character arrangement table during printing.

**table space.** An abstraction of a collections of containers into which database objects are stored. A table space provides a level of indirection between a database and the tables stored within the database. A table space:

- Has space on media storage devices assigned to it.
- Has tables created within it.

**tag.** (1) A type of structured field used for indexing in an AFP document. Tags associate an index attribute-value pair with a specific page or group of pages in a document. (2) In text formatting markup language, a name for a type of document element that is entered in the source document to identify it.

**Tagged Image File Format (TIFF).** A bit-mapped graphics format for scanned images with resolutions of up to 300 dpi. TIFF simulates gray scale shading.

**TB.** Terabyte.

**TCP.** Transmission Control Protocol.

**TCP/IP.** Transmission Control Protocol/Internet Protocol.

**terabyte.** A unit of memory or space measurement capacity equal to approximately one trillion bytes. One terabyte is equal to 1,000 gigabytes, or one million megabytes.

**text.** (1) A type of data consisting of a set of linguistic characters (letters, numbers, and symbols) and formatting controls. (2) In word processing, information intended for human viewing that is presented in a two-dimensional form, such as data printed on paper or displayed on a screen.

**throughput.** A measure of the amount of work performed by a computer system over a period of time, for example, the number of jobs per day. (I)

**TIFF.** Tagged Image File Format.

**token name.** An eight-byte name that can be given to all data stream objects.

**token-ring network.** A ring network that allows unidirectional data transmission between data stations, by a token passing procedure, such that the transmitted data return to the transmitting station. (T)

**toolbar.** The region directly beneath the menu bar of the main window in OnDemand client programs that support a graphical user interface.

**toolbar button.** A small bitmap on the toolbar that represents a command in OnDemand client programs that support a graphical user interface. Click a toolbar button to quickly access a command.

**trigger.** Data values that ACIF searches for in a print data stream, to delineate the beginning of a new group of pages. The first trigger is then the anchor point ACIF uses to locate index values.

**transfer.** To send data to one place and to receive data at another place.

**transform.** To change the form of data according to specified rules without significantly changing the meaning of the data. (I) (A)

**Transmission Control Protocol (TCP).** A communications protocol used in Internet and in any network that follows the U.S. Department of Defense standards for inter-network protocol. TCP provides a host-to-host protocol between hosts in packet-switched communications

networks and in interconnected systems of such networks. It assumes that the Internet protocol is the underlying protocol.

**Transmission Control Protocol/Internet Protocol (TCP/IP).** A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

**TRC.** Table reference character.

**type.** To enter specific information using the keyboard, typing characters exactly as given.

## U

**unformatted print data.** Data that is not formatted for printing. A page definition can contain controls that map unformatted print data to its output format.

**UNIX operating system.** An operating system developed by Bell Laboratories that features multiprogramming in a multi-user environment. The UNIX operating system was originally developed for use on minicomputers but has been adapted for mainframes and microcomputers.

**upload.** To transfer data from one computer to another. Typically, users upload from a small computer to a large one.

**user.** A person authorized to logon to an OnDemand server.

**user exit.** (1) A point in an IBM-supplied program at which a user exit routine may be given control. (2) A programming service provided by an IBM software product that may be requested during the execution of an application program for the service of transferring control back to the application program upon the later occurrence of a user-specified event.

**user interface.** The hardware, software, or both that implements a user interface, allowing the user to interact with and perform operations on



a system, program, or device. Examples are a keyboard, mouse, command language, or windowing subsystem.

## V

**value.** (1) A set of characters or a quantity associated with a parameter or name. (2) A quantity assigned to a constant, variable, parameter, or symbol.

**variable.** (1) A name used to represent a data item whose value can change while the program is running. (2) In programming languages, a language object that can take different values at different times. (3) A quantity that can assume any of a given set of values.

**version number.** The version level of a program, which is an indicator of the hardware and basic operating system upon which the program operates. The version, release, modification, and fix levels together comprise the program level or version of a program.

**virtual printer.** A view of a printer that refers only to the high-level data stream, such as ASCII or PostScript, that the printer understands. It does not include any information about how the printer hardware is attached to the host

computer or the protocol used for transferring data to and from the printer.

**volume.** The basic unit of storage for a database, log file, or a storage pool. A volume can be an LVM logical volume, a standard file system file, a tape cartridge, or an optical platter. Each volume is identified by a unique volume identifier.

## W

**wildcard.** Search characters that represent other letters, numbers, or special characters. In OnDemand, the %(percentage) and the \_(underscore) are wildcard characters.

**window.** A part of a display screen with visible boundaries in which information is presented.

**workstation.** A terminal or microcomputer, usually one that is connected to a mainframe or to a network, at which a user can perform applications.

**write access.** In computer security, permission to write to an object.

**writer.** A JES function that processes print output.



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Windows NT and Windows 95  
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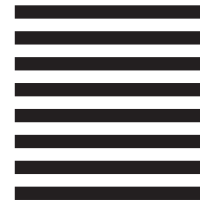
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