

AFS for Windows



Quick Beginnings

Version 3.6

AFS for Windows



Quick Beginnings

Version 3.6

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 27.

First Edition (April 2000)

This edition applies to:

IBM AFS for Windows, Version 3.6

and to all subsequent releases and modifications until otherwise indicated in new editions.

Order publications through your IBM representative or through the IBM branch office serving your locality.

© **Copyright International Business Machines Corporation 1999. All rights reserved.**

US Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

IBM AFS for Windows Quick Beginnings	1	To Configure the AFS Client as an AFS Light Gateway	9
Introduction	1	To Configure AFS Light	11
Document Overview	1	To Configure the AFS Server	12
Audience	1	To Configure the AFS Control Center	19
Organization	1	Uninstalling AFS for Windows	20
Installing AFS for Windows	2	Reinstalling and Upgrading	20
AFS for Windows Components	2	Uninstallation Prerequisites	21
Installation Options	2	To Uninstall AFS for Windows	21
Upgrading From an Earlier Version	3	Changes Made to Your System	21
To Install AFS for Windows	3	Index	25
Changes Made to Your System	4	Notices	27
AFS for Windows Documentation	7	Trademarks	29
The Online Documentation Directory	7		
The CD-ROM Documentation Directory	8		
Online Help	8		
Configuring AFS for Windows	8		
To Configure the AFS Client	9		

IBM AFS for Windows Quick Beginnings

Introduction

AFS[®] is an enterprise file system that provides consistent file access by way of a shared filespace. By joining the local file systems of several File Server machines, AFS presents a single filespace independent of machine boundaries. Files are stored on different machines in the computer network but are accessible from all machines across the enterprise.

IBM AFS for Windows[®], version 3.6 extends the full capabilities of AFS to Microsoft[®] Windows operating systems.

Document Overview

This document summarizes installation prerequisites, provides detailed instructions on how to install, configure, and uninstall AFS for Windows, and outlines the changes made to your system during the installation and uninstallation processes. This document also describes the documentation provided with AFS for Windows.

Audience

This document provides information for system administrators and users responsible for the installation and configuration of the products included in AFS for Windows. This document assumes that system administrators are familiar with system administration in general and that users are familiar with the basic terms and concepts of the Microsoft Windows operating systems.

Organization

This document has the following organization:

- “Installing AFS for Windows” on page 2 outlines installable combinations of AFS components, describes the procedure for installing the products that are included in AFS for Windows, and lists the changes that the installation process makes to your system.
- “AFS for Windows Documentation” on page 7 presents the various types of documentation that are provided with AFS for Windows and discusses procedures for accessing this documentation.
- “Configuring AFS for Windows” on page 8 describes the procedures for configuring the products that are included in AFS for Windows.

- “Uninstalling AFS for Windows” on page 20 outlines uninstallation prerequisites, describes the procedure for uninstalling the products that are included in AFS for Windows, and lists the changes that the uninstallation process makes to your system.

Installing AFS for Windows

This section outlines installable combinations of AFS components, describes the procedure for installing AFS for Windows, and lists the changes that the installation process makes to your system.

AFS for Windows Components

AFS for Windows, version 3.6 includes the following components:

- **AFS Server**

The AFS Server runs AFS server processes and includes the AFS Server Configuration Wizard to facilitate setup.

- **AFS Control Center**

The AFS Control Center includes two powerful graphical user interface (GUI) tools to assist AFS system administrators in AFS cell administration: the AFS Server Manager and the AFS Account Manager.

- **AFS Client**

The AFS Client provides direct access to the AFS filespace, enabling users to manage files and directories in AFS. The AFS Client includes the AFS Light Gateway.

- **AFS Light**

AFS Light provides access to the AFS filespace via an AFS Light Gateway machine, enabling users to manage files and directories in AFS.

- **AFS Supplemental Documentation**

AFS Supplemental Documentation provides additional AFS system administration information and includes the following documents: *IBM AFS Administration Guide* and *IBM AFS Administration Reference*.

Installation Options

You can install the components of AFS for Windows in various combinations, based on your Windows operating system. Refer to the *IBM AFS for Windows Release Notes* for details on the specific software requirements for each AFS for Windows component. Note that if you are installing the AFS Server, you must also install the AFS Client, unless the AFS Client, version 3.6 is already installed on the machine. Follow the installation procedure described in “To Install AFS for Windows” on page 3 regardless of the components you are installing.

Note: You have the option of altering the AFS for Windows setup program to disable all but the client component. Such a client-only setup program renders users unable to install any components other than the AFS Client. To perform a client-only installation, create the file **setup.co** in the same directory as the other installation files; the setup program then only allows the AFS Client to be installed. Note that the contents of the **setup.co** file are irrelevant. Follow the installation procedure described in “To Install AFS for Windows” regardless of the type of installation you are performing.

Upgrading From an Earlier Version

On a Windows NT machine, it is *not* necessary to uninstall the components of AFS for Windows for the purpose of upgrading the software; you can install this release of AFS for Windows on your system *without* removing or unconfiguring your existing software. To upgrade AFS for Windows, follow the installation procedure described in “To Install AFS for Windows”. During the installation process, the previous-version AFS component is upgraded and the AFS configuration information is preserved.

On a Windows 95 or Windows 98 machine, you must uninstall the previously-installed AFS Light component, as described in “To Uninstall AFS for Windows” on page 21, before upgrading AFS Light.

Note that the AFS for Windows installation tool does *not* allow a user to install AFS components that have different version numbers. If you have more than one AFS for Windows component installed on your machine, you cannot update one component without updating all of the other components as well.

To Install AFS for Windows

Before installing AFS for Windows, refer to your *IBM AFS for Windows Release Notes* for a detailed description of the installation prerequisites. If you are running any other Windows applications, it is recommended that you exit from them before installing AFS for Windows.

1. Insert the AFS for Windows installation disk into your CD-ROM drive.
2. Run the AFS for Windows **setup** program by using one of the following methods:
 - From the **Start** menu, select **Run**. Type *drive:\setup* where *drive* is the drive letter of your CD-ROM drive. Click **OK**.
 - In the **Windows Explorer**, select your CD-ROM drive, and double-click the **setup.exe** program.
3. The Welcome dialog box appears. Select the **Next** button to continue with the installation process.

4. The Select Components dialog box appears.
 - In the **Components** box, select the AFS for Windows components that you want to install or upgrade. See “Installation Options” on page 2 for information on the various combinations of components that can be installed on a Windows machine. Note that if you are installing the AFS Server, you must also select to install (or upgrade) the AFS Client, unless the AFS Client, version 3.6 is already installed on your system.
 - The **Destination Folder** box indicates the default drive and directory in which the selected components will be installed. The default drive is the drive where Windows is installed. The default directory on that drive is `\Program Files\Ibm\Afs`. To select another drive, directory, or both, select the **Browse** button.

Note: If you are upgrading from a previous-version of AFS for Windows or reinstalling AFS for Windows, the installation directory that you choose must be the same as the installation directory that was used by the previously-installed version.

Select the **Next** button to continue with the installation process.

5. The application files for the selected AFS for Windows components are installed on your system. When the installation process finishes, the Setup Complete dialog box appears, indicating that you must restart your system before you can use the installed AFS products. Select **Yes, I want to restart my computer now**, and then select the **Finish** button. Your system is shut down and then restarted.

Installation of AFS for Windows is complete.

Changes Made to Your System

This section describes the changes that are made to your system by installing each AFS for Windows component. The information in this section is based upon the default installation settings.

Changes made to your system by installing the AFS Client

Installing the AFS Client for Windows NT makes the following changes to your system:

- Creates a **Start** menu program group named **IBM AFS** with the following program applications:
 - The **Documentation** program entry allows access to the AFS online documentation set that is provided with AFS for Windows.
 - The **Client** program subgroup enables users to access the AFS Client property box and the AFS Client Online Help.
- Adds the AFS Menu to the Windows NT Explorer’s context menu.

- Creates a documentation directory and places the *IBM AFS for Windows Quick Beginnings* and the *IBM AFS for Windows Release Notes* online documents in the directory, which is located at **\Program Files\Ibm\Afs\Documentation**.
- Adds **AFS Credentials** to the **Startup** program group. The **AFS Client** icon is displayed in the taskbar at startup.
- Creates the installation directories in which the setup program installs AFS binaries, icons, and help files. The default directories are **\Program Files\Ibm\Afs\Client\Program** and **\Program Files\Ibm\Afs\Common**.
- Registers the AFS Client as a service.
- Installs the AFS Client Configuration utility and adds the **AFS Client Configuration** icon to the Control Panel by placing the **afs_cpa.cpl** file in the **\WindowsDefault\system32** directory, where *WindowsDefault* is your Windows directory.
- Places the **afsdcell.ini** file in your Windows directory and in the **\Program Files\Ibm\Afs\Common** directory. If you have upgraded from a previous-version AFS Client, the AFS Client cell database (**afsdcell.ini**) in the Windows directory is not replaced.
- Modifies the Windows NT Registry by adding entries relevant to the AFS Client.

Changes made to your system by installing AFS Light

Installing AFS Light for Windows 95 and Windows 98 makes the following changes to your system:

- Creates a program group named **IBM AFS** with the following program applications:
 - The **Documentation** program entry allows access to the AFS online documentation set that is provided with AFS for Windows.
 - The **Light** program subgroup enables users to access the AFS Light property box and the AFS Light Online Help.
- Adds the AFS Menu to the Windows Explorer's context menu.
- Creates a documentation directory and places the *IBM AFS for Windows Quick Beginnings* and the *IBM AFS for Windows Release Notes* online documents in the directory, which is located at **\Program Files\Ibm\Afs\Documentation**.
- Creates the installation directories in which the setup program installs AFS binaries, icons, and help files. The default directories are **\Program Files\Ibm\Afs\Client\Program** and **\Program Files\Ibm\Afs\Common**.
- Installs the AFS Light Configuration utility and adds the **AFS Light Configuration** icon to the Control Panel by placing the **afs_cpa.cpl** file in the **\WindowsDefault\system** directory, where *WindowsDefault* is your Windows directory.

- Places the **afsdcell.ini** file in your Windows directory and in the **\Program Files\Ibm\Afs\Common** directory.
- Modifies the Windows Registry by adding entries relevant to AFS Light.

Changes made to your system by installing the AFS Server

Installing the AFS Server for Windows NT makes the following changes to your system:

- Creates a **Start** menu program group named **IBM AFS** with the following program applications:
 - The **Documentation** program entry allows access to the AFS online documentation set that is provided with AFS for Windows.
 - The **Server** program subgroup enables users to access the AFS Server Quick-Start Wizard.
- Creates a documentation directory and places the *IBM AFS for Windows Quick Beginnings* and the *IBM AFS for Windows Release Notes* online documents in the directory, which is located at **\Program Files\Ibm\Afs\Documentation**.
- Creates the installation directories in which the setup program installs AFS binaries, icons, and help files. The default directories are **\Program Files\Ibm\Afs\Server\usr\afs\bin** and **\Program Files\Ibm\Afs\Common**.
- Registers the AFS Server as a service.
- Installs the AFS Server Configuration application and adds the **AFS Server Configuration** icon to the Control Panel by placing the **afsserver.cpl** file in the **\WindowsDefault\system32** directory, where *WindowsDefault* is your Windows directory.
- Modifies the Windows NT Registry by adding entries relevant to the AFS Server.

Changes made to your system by installing the AFS Control Center

Installing the AFS Control Center for Windows NT makes the following changes to your system:

- Creates a **Start** menu program group named **IBM AFS** with the following program applications:
 - The **Documentation** program entry allows access to the AFS online documentation set that is provided with AFS for Windows.
 - The **Control Center** program subgroup enables users to access the Account Manager and the Server Manager.

- Creates a documentation directory and places the *IBM AFS for Windows Quick Beginnings* and the *IBM AFS for Windows Release Notes* online documents in the directory, which is located at **\Program Files\Ibm\Afs\Documentation**.
- Creates the installation directories in which the setup program installs AFS binaries, icons, and help files. The default directories are **\Program Files\Ibm\Afs\Control Center** and **\Program Files\Ibm\Afs\Common**.
- Installs the AFS Control Center Properties utility and adds the **AFS Control Center** icon to the Control Panel by placing the **afs_cpa.cpl** file in the **\WindowsDefault\system32** directory, where *WindowsDefault* is your Windows directory. This icon is added to the Control Panel if only the AFS Control Center is installed on your system.
- Places the **afsdcell.ini** file in your Windows directory and in the **\Program Files\Ibm\Afs\Common** directory.
- Modifies the Windows NT Registry by adding entries relevant to the AFS Control Center.

Changes made to your system by installing the AFS Supplemental Documentation

Installing the AFS Supplemental Documentation makes the following changes to your system:

- Creates a **Start** menu program group named **IBM AFS** with a program entry named **Documentation**.
- The following system administration documents are installed on the machine: *IBM AFS Administration Guide* and *IBM AFS Administration Reference*. These documents are added to the online documentation directory, which is located at **\Program Files\Ibm\Afs\Documentation**. The *IBM AFS for Windows Quick Beginnings* and the *IBM AFS for Windows Release Notes* online documents are also installed in the documentation directory.
- Modifies the Windows NT Registry by adding entries relevant to the AFS Supplemental Documentation.

AFS for Windows Documentation

This section describes the documentation that is provided with AFS for Windows and details the procedures for accessing this documentation.

The Online Documentation Directory

Regardless of the components you install on your system, a documentation directory is created. The default location is **\Program Files\Ibm\Afs\Documentation**. This directory includes the *IBM AFS for*

Windows Quick Beginnings and *IBM AFS for Windows Release Notes*. These same documents are available from the Documentation index accessed from the **Documentation** entry in the **Start** menu.

If you install the AFS Supplemental Documentation, then the documentation directory also includes the following documents: *IBM AFS Administration Guide* and *IBM AFS Administration Reference*. These same documents are available from the Documentation index accessed from the **Documentation** entry in the **Start** menu.

To access the online documentation directory:

1. From the **Start** menu, choose **Programs**, then choose **IBM AFS**, then choose **Documentation**.
2. Select the document that you want to view.

The CD-ROM Documentation Directory

The AFS for Windows CD-ROM contains a documentation directory. This directory includes the following documentation: *IBM AFS for Windows Quick Beginnings*, *IBM AFS for Windows Release Notes*, *IBM AFS Administration Guide*, and *IBM AFS Administration Reference*. The documentation is provided in HTML and PDF formats.

To access the CD-ROM documentation directory:

1. Insert the AFS for Windows CD-ROM into your machine's CD-ROM drive.
2. Follow one of the paths listed below. Note that *CD* is the drive letter of your CD-ROM drive.
 - For HTML documentation, follow the path *CD:\Documentation\Html*.
 - For PDF documentation, follow the path *CD:\Documentation\Pdf*.

Online Help

Online help is installed along with each AFS for Windows component. The online help documentation describes the features available from each component. Use the **Help** menus and **Help** buttons located on most dialog boxes to access the online help. You can get help on topics by browsing the contents page, using the index to locate topics, and using **Find**, the online help search engine.

Configuring AFS for Windows

This section details the configuration procedure for each of the components of AFS for Windows. You must configure the components on your system before you can use AFS.

To Configure the AFS Client

Note: If you intend to configure the AFS Server on your Windows NT system, you do not need to configure the AFS Client. The AFS Client is configured automatically when the AFS Server is configured. In addition, if you upgraded to this version of AFS for Windows from a previous-version AFS Client, configuration information is preserved. You do not need to reconfigure the AFS Client.

1. From the **Start** menu, choose **Settings**, then choose **Control Panel**.
2. Double-click the **AFS Client Configuration** icon. The AFS Client Configuration utility opens, displaying the **General** tab.
3. In the **Cell Name** box, enter the name of the AFS cell in which the machine is to be a client.
4. Select the **AFS Cells** tab. If the cell in which the machine is to be a client is not listed in the list of AFS cells, choose the **Add** button. The New Cell dialog box opens. Enter the cell name in the **AFS Cell** box and a short description in the **Description** box.
Choose the **Add** button. The Add Server dialog box opens. In the **Server Name** box, enter the name of a Volume Location Server in the selected cell. Choose **OK** to close the Add Server dialog box. Repeat this process, adding information for all Volume Location Servers in the cell. (If you do not know the names of the Volume Location Servers in the AFS cell, consult your AFS system administrator.) After all server information has been entered, choose **OK** to close the New Cell dialog box.
5. Select the **General** tab and choose the **Start Service** button to start the AFS Client service.
6. Select the **Drive Letters** tab. To map a drive letter on the Windows NT machine to the AFS filesystem, choose the **Add** button. The Map Drive Letter dialog box opens.
7. In the **Drive Letter** box, select the drive to be mapped to the AFS filesystem or accept the default. In the **AFS Path** box, indicate the AFS location to which you want to map the selected drive, for example, `/afs`. If desired, enter a description of the AFS drive mapping in the **Description** box. Choose **OK** to connect the drive to the specified place in the AFS filesystem.
8. Choose **OK** to close the AFS Client Configuration utility.
The AFS Client is now configured in the selected AFS cell and the AFS filesystem can be accessed via the selected drive mapping in the Windows NT Explorer.

To Configure the AFS Client as an AFS Light Gateway

You can configure the AFS Client on your Windows NT machine to serve as an AFS Light Gateway. Your AFS Client, configured as an AFS Light Gateway, makes it possible for AFS Light users to access the AFS filesystem.

1. Configure the AFS Client as detailed in “To Configure the AFS Client” on page 9 .
2. From the **Start** menu, choose **Settings**, then choose **Control Panel**.
3. Double-click the **AFS Client Configuration** icon. The AFS Client Configuration utility opens, displaying the **General** tab.
4. Select the **Provide an AFS Light Gateway** option.
5. Choose **OK**.
 - If the AFS Client service is running, a message box appears, informing you that the service must be restarted. Choose **Yes** to restart the AFS Client service and enable the AFS Light Gateway.
 - If the AFS Client service is stopped, a message box appears, informing you that you must start the AFS Client service. Choose **Yes** to start the AFS Client service and enable the AFS Light Gateway.
6. Add cell entries to your AFS Light Gateway’s cell database. Note that in order for an AFS Light user to access a cell, an entry for the cell must exist in both the AFS Light cell database and the AFS Light Gateway cell database. Incorrect or missing information about a cell in the gateway machine’s cell database renders light client machines unable to access files.

To add an entry to the cell database:

Access the **AFS Cells** tab from the AFS Light Configuration utility and choose the **Add** button. The New Cell dialog box opens. Enter the cell name in the **AFS Cell** box and a short description in the **Description** box. Choose the **Add** button. The Add Server dialog box opens. In the **Server Name** box, enter the name of a Volume Location Server in the selected cell. Choose **OK** to close the Add Server dialog box. Repeat this process, adding information for all Volume Location Servers in the cell. (If you do not know the names of the Volume Location Servers in the AFS cell, consult your AFS system administrator.) After all server information has been entered, choose **OK** to close the New Cell dialog box.

The Windows NT machine is now configured as an AFS Light Gateway. Once configured as an AFS Light Gateway, your AFS Client machine must be able to authenticate AFS Light users in a Windows context. This authentication can be achieved via a *domain* user account or via synchronized *machine* user accounts. A domain user account is a user account in a Windows domain. A machine user account is a user account that is valid only on a particular host machine.

When the AFS Light Gateway is configured into a Windows domain, the AFS Light user must log onto either a domain user account in the domain to which the gateway belongs or a machine user account with the same username and password as that of a domain user account in the gateway domain.

If machine user accounts are employed, then these accounts must be synchronized on the AFS Light Gateway and AFS Light machines. A user must log onto an AFS Light machine with the same username and password as that of a machine user account that is defined on the AFS Light Gateway machine.

To Configure AFS Light

AFS Light accesses the AFS filespace via an AFS Light Gateway. Before configuring AFS Light, you must have a Windows NT machine running the AFS Client and configured as an AFS Light Gateway. See “To Configure the AFS Client as an AFS Light Gateway” on page 9 for more information.

1. From the **Start** menu, choose **Settings**, then choose **Control Panel**.
2. Double-click the **AFS Light Configuration** icon. The AFS Light Configuration utility opens, displaying the **General** tab.
3. In the **Gateway** box, enter the name of a Windows NT machine that is configured as an AFS Light Gateway and click **Connect Now**. The name of the gateway machine is the gateway’s NetBIOS service name, in the form *mach-afs*, where *mach* is the host computer name up to a maximum of 11 characters. AFS Light must be able to resolve this service name in order to communicate with the gateway machine. Name resolution can be achieved by adding the gateway’s NetBIOS service name to the client’s LMHOSTS file or to the appropriate DNS or WINS servers. If the AFS Light machine and its AFS Light Gateway machine reside on the same subnet, then no additional configuration is required.

AFS Light automatically becomes a member of the same cell as its AFS Light Gateway. The name of the cell is displayed in the **Cell Name** box.

Note: If the AFS Light Gateway machine is in the same domain as the AFS Light machine and the hostname of the gateway machine in this domain is *xyz-pc*, you can specify the computer name in the **Gateway** box as either *xyz-pc* or *xyz-pc.xcompany.com*.

4. Select the **AFS Cells** tab. If the cell to which the machine belongs is not listed in the list of AFS cells, choose the **Add** button. The New Cell dialog box opens. Enter the cell name in the **AFS Cell** box and a short description in the **Description** box.

Choose the **Add** button. The Add Server dialog box opens. In the **Server Name** box, enter the name of a Volume Location Server in the selected cell. Choose **OK** to close the Add Server dialog box. Repeat this process, adding information for all Volume Location Servers in the cell. (If you do not know the names of the Volume Location Servers in the AFS cell, consult your AFS system administrator.) After all server information has been entered, choose **OK** to close the New Cell dialog box.

Note that an identical entry must exist in the AFS Light Gateway’s cell database (*afsdcell.ini* file) in order for the AFS Light user to authenticate

to the cell. See “To Configure the AFS Client as an AFS Light Gateway” on page 9 for more information on synchronizing the gateway machine’s cell database with your light client’s cell database.

5. Select the **Drive Letters** tab. To map a drive letter on the Windows machine to the AFS filesystem, choose the **Add** button. The Map Drive Letter dialog box opens.
6. In the **Drive Letter** box, select the drive to be mapped to the AFS filesystem or accept the default. In the **AFS Path** box, indicate the AFS location to which you want to map the selected drive, for example, `/afs`. If desired, enter a description of the AFS drive mapping in the **Description** box. Choose **OK** to connect the drive to the specified place in the AFS filesystem.
7. Choose **OK** to close the AFS Light Configuration utility.
AFS Light is now configured in the specified AFS cell and the AFS filesystem can be accessed via the drive mapping in the Windows Explorer.

To Configure the AFS Server

The configuration process starts the services needed to run the AFS Server and sets up AFS partitions on your Windows NT machine. Using the AFS Configuration Wizard, you can quickly configure the AFS Server as either the first server in a new AFS cell or as a server in an existing AFS cell. Note that if you have upgraded to this version of the AFS Server, previous-version configuration information is preserved; you do not need to reconfigure the server.

To configure the AFS Server as the first AFS Server in a cell:

1. From the **Start** menu, choose **Programs**, then choose **IBM AFS**, then choose **Server**, and then choose **Configuration Wizard**. The AFS Server Quick-Start Wizard opens.
2. Choose the **Next** button. The Cell and Server Information dialog box appears.
3. Choose the **This will be the first server in a new AFS cell** option.
4. In the **Cell Name** box, enter a name for the new AFS cell.

The following constraints apply to the form of an internet domain name that can be used as the name of an AFS cell:

- The cell name must be unique in order to distinguish your AFS cell from all others in the AFS global namespace.
- The cell name can contain as many as 64 characters; however, shorter names are recommended.
- The cell name must include only lowercase characters, numbers, underscores, dashes, and periods to ensure portability between different operating system types.

- The cell name can include any numbers or letters, which are conventionally separated by periods.
 - The cell name must end in a suffix that indicates the type of institution to which it belongs. Some of the standard suffixes are **.com**, for business and other commercial organizations, **.edu**, for educational institutions such as universities, **.gov**, for government institutions, and **.mil**, for military institutions.
5. In the **Password** box, enter the character string to serve as the password for the AFS Server principal account in the cell (**afs**). All AFS Servers obtain AFS tokens as this principal, and the Authentication Server's Ticket Granting Service (TGS) module uses this password to encrypt the server tickets that AFS Clients present to servers during mutual authentication.
 6. In the **Verify password** box, retype the initial AFS password for the AFS Server principal account for this cell to confirm the password selection.
 7. Choose the **Next** button. The Administrative Information dialog box appears.
 8. In the **Name** box, enter a username to serve as a generic AFS administrative account for this cell (generally, **admin**.)
Use of a generic administrative account means that you do not need to grant privileges to each system administrator. Instead, each administrator knows the name and password of this generic administrative account and uses this identity to authenticate to AFS when performing tasks that require administrative privileges.
 9. In the **Password** box, enter a character string to serve as the password for the AFS administrative account.
 10. In the **Verify password** box, retype the password for the AFS administrative account to confirm the password selection.
 11. Specify the AFS User ID (UID) to assign to the AFS administrative account:
 - (Recommended) To automatically assign the next available UID to the AFS administrative account, choose the **Use the next available AFS UID** option.
 - To assign a specific UID to the AFS administrative account, choose the **Use this AFS ID** option and enter the desired UID in the entry box.

Note: It is not generally recommended that you assign a specific UID to a new AFS account, unless you need to make the AFS UID match an existing UNIX UID.
 12. Choose the **Next** button. The File Service dialog box appears.
AFS File Servers deliver requested files and data from the server to AFS Clients. File Servers store files and data, handle requests for copying,

moving, creating, and deleting files and directories, and keep track of status information about each file and directory on the server.

Because you are configuring the first AFS Server in a new cell, the File Service must be configured on the server, and will be configured automatically.

13. Choose the **Next** button. The Database Service dialog box appears.
Every AFS cell must contain at least one Database Server. Each Database Server runs the Database processes that maintain the AFS databases: the Authentication Database, the Protection Database, the Volume Location Database, and optionally the Backup Database.
Because you are configuring the first AFS Server in a new cell, the Database Service must be configured on the server, and will be configured automatically.
14. Choose the **Next** button. The Backup Server dialog box appears.
A Backup Server maintains the Backup Database where information related to the Backup system is stored. The Backup Server enables the AFS system administrator to back up data in the AFS filespace from volumes to tape. The data can then be restored from tape in the event that it is lost from the file system (for example, if a system or disk failure causes data to be lost).
15. Choose the **Yes, configure as a Backup Server** option if you want to configure this AFS Server as a Backup Server. If you do not want to configure this AFS Server as a Backup Server, choose the **No, do not configure as a Backup Server** option.

Note: If the Backup Server is configured on any Database Server in the cell, it must be configured on *all* Database Servers in the cell.

16. Choose the **Next** button. The AFS Partition dialog box appears.
Every AFS File Server must have at least one partition designated exclusively to storing AFS volumes, and all AFS volumes must reside on partitions that have been designated as AFS partitions. On a Windows NT machine, only NTFS volumes can be designated as AFS partitions. In addition, AFS partitions can be created only on NTFS volumes that are empty (or contain only the Windows NT Recycle Bin).
Because you are configuring the first AFS Server in a new cell, you must designate an AFS partition on the server.
17. In the list of NTFS volumes, choose the volume you want to designate as an AFS partition. In the **AFS Partition Name** box, enter the last part of the partition name.

Note: There can exist up to 256 AFS partitions on an AFS Server. By convention, each partition is named **/vicepx**, where *x* is one or two lowercase letters of the English alphabet. AFS partitions can be

named **/vicepa**, **/vicepb**, and so on up to **/vicepz**. Additional partitions can be named **/vicepaa** through **vicepaz** and so on up to **/vicepiv**.

It is strongly recommended that you use the NTFS volume drive letter as the last letter of the partition name.

18. Choose the **Next** button. The Root AFS Volumes dialog box appears. The root AFS volumes are two volumes that every AFS cell must include in its file system. They are named:
 - **root.afs**, for the volume corresponding to the top (**/afs**) level of the AFS filesystem
 - **root.cell**, for the volume mounted just below **/afs** at the cell's name (for example, **/afs/yourcompany.com** in the **yourcompany.com** cell)

Because you are configuring the first AFS Server in a new cell, the cell's root volumes must be created on the server, and will be created automatically during the configuration of the server.

19. Choose the **Next** button. The Replication dialog box appears. If you want to be able to take advantage of the replication capabilities of AFS, the AFS root volumes must be replicated. The replication process creates one or more read-only copies of an AFS volume, and distributes these copies to one or more other sites (AFS partitions and servers). Replication increases system efficiency and improves data availability by making the contents of an AFS volume accessible on one or more AFS File Server machines.

Because you are configuring the first AFS Server in a new cell, the cell's root volumes must be replicated on the server, and will be replicated automatically during the configuration of the server.

20. Choose the **Next** button. The System Control Service dialog box appears. In cells running the domestic version of AFS for Windows, the System Control Server distributes new versions of AFS Server configuration information to all AFS servers. It is generally recommended that you designate the first server in an AFS cell as the System Control Server. (Cells running the international version of AFS for Windows do not use the System Control Server to distribute system configuration files.)

Note: The role of System Control Server can later be assigned to a different server machine if desired. However, depending on the number of AFS servers in the cell, the process of assigning the role to another machine can be very time-consuming.

21. To configure this AFS Server as the System Control Server for the AFS cell, choose the **Configure as the System Control Server** option. If you

do not want to configure this AFS Server as the System Control Server for the AFS cell, choose the **Do not configure as the System Control Server** option.

22. Choose the **Next** button. The Configure the System dialog box appears. A list of the steps that will be taken to configure this AFS Server is displayed, enabling you to review the steps before starting the actual configuration process.

Note: To return to a previous step to review or modify your selections, choose the **Back** button.

23. To begin configuration of the AFS Server on this machine, choose the **Configure** button. The AFS Server is configured according to your specifications. The progress bar at the bottom of the dialog box indicates the steps in progress. A message box appears indicating that configuration is complete.

To configure the AFS Server into an existing AFS cell:

1. From the **Start** menu, choose **Programs**, then choose **IBM AFS**, then choose **Server**, and then choose **Configuration Wizard**. The AFS Server Quick-Start Wizard opens.
2. Choose the **Next** button. The Cell and Server Information dialog box appears.
3. Choose the **Make this host a server in an existing AFS cell** option.
4. In the **Cell Name** box, enter the name of the AFS cell to which you want to add the new AFS Server.
5. Choose the **Next** button. The Administrative Information dialog box appears.
6. In the **Name** box, enter the username of the AFS administrative account, for example **admin**, or the username of an AFS user account with administrative privileges.
7. In the **Password** box, enter the password for the AFS administrative account or the AFS user account with administrative privileges entered in the **Name** box.
8. In the **AFS Server** box, enter the hostname of a running AFS Server in this AFS cell. AFS configuration information will be retrieved from the server for use in configuring this new AFS Server.
9. Choose the **Next** button. The File Service dialog box appears.

AFS File Servers deliver requested files and data from the server to AFS Clients. File Servers store files and data, handle requests for copying, moving, creating, and deleting files and directories, and keep track of status information about each file and directory on the server.

To configure this AFS Server as a File Server, choose the **Yes, configure as a File Server** option. If you do not want to configure this AFS Server as a File Server, choose the **No, do not configure as a File Server** option.

10. Choose the **Next** button. The Database Service dialog box appears.

Every AFS cell must contain at least one Database Server. Each Database Server runs the Database processes that maintain the AFS databases: the Authentication Database, the Protection Database, the Volume Location Database, and optionally the Backup Database.

To configure this AFS Server as a Database Server, choose the **Yes, configure as a Database Server** option. If there is a System Control Server in the AFS cell to which you are adding the server, enter its hostname in the System Control Server box. AFS configuration information (for example, the list of AFS Database Servers maintained in the **CellServDB** file on each AFS Server machine) will be updated by this server. If you do not want to configure this AFS Server as a Database Server, choose the **No, do not configure as a Database Server** option.

11. Choose the **Next** button. The Backup Server dialog box appears.

A Backup Server maintains the Backup Database where information related to the Backup system is stored. The Backup Server enables the AFS system administrator to back up data in the AFS filespace from volumes to tape. The data can then be restored from tape in the event that it is lost from the file system (for example, if a system or disk failure causes data to be lost).

Note: The Backup Server can only be configured on a machine that is configured as a Database Server. Also, if the Backup Server is configured on any Database Server in the cell, it must be configured on *all* Database Servers in the cell.

12. Choose the **Yes, configure as a Backup Server** option if you want to configure this AFS Server as a Backup Server. If you do not want to configure this AFS Server as a Backup Server, choose the **No, do not configure as a Backup Server** option.

13. Choose the **Next** button. The AFS Partition dialog box appears.

If you are configuring this AFS Server as a File Server, you must specify an NTFS volume to designate as an AFS partition. Every AFS File Server must have at least one partition designated exclusively to storing AFS volumes, and all AFS volumes must reside on partitions that have been designated as AFS partitions. On a Windows NT machine, only NTFS volumes can be designated as AFS partitions. In addition, AFS partitions can be created only on NTFS volumes that are empty (or contain only the Windows NT Recycle Bin).

To designate a volume as an AFS partition, choose the **Yes, create a partition** option. In the list of NTFS volumes, choose the volume that you

want to designate as an AFS partition. In the **AFS Partition Name** box, enter the last part of the partition name.

Note: There can exist up to 256 AFS partitions on an AFS Server. By convention, each partition is named **/vicepx**, where *x* is one or two lowercase letters of the English alphabet. AFS partitions can be named **/vicepa**, **/vicepb**, and so on up to **/vicepz**. Additional partitions can be named **/vicepaa** through **vicepaz** and so on up to **/vicepiv**.

It is strongly recommended that you use the NTFS volume drive letter as the last letter of the partition name.

If you do not want to designate a volume as an AFS partition, choose the **No, do not create a partition** option.

14. Choose the **Next** button. The Root AFS Volumes dialog box appears.

The root AFS volumes are two volumes that every AFS cell must include in its file system. They are named:

- **root.afs**, for the volume corresponding to the top (**/afs**) level of the AFS filesystem
- **root.cell**, for the volume mounted just below **/afs** at the cell's name (for example, **/afs/yourcompany.com** in the **yourcompany.com** cell)

Because you are adding this AFS Server to an existing AFS cell, the root AFS volumes already exist in the cell, and the AFS Configuration Wizard indicates that you do not need to create the root volumes.

Note: If for some reason the root AFS volumes do not yet exist in this AFS cell, you can choose the **Yes, create the root volumes** option to create the root volumes on this AFS Server.

15. Choose the **Next** button. The Replication dialog box appears.

If you want to be able to take advantage of the replication capabilities of AFS, the AFS root volumes must be replicated. The replication process creates one or more read-only copies of an AFS volume, and distributes these copies to one or more other sites (AFS partitions and servers). Replication increases system efficiency and improves data availability by making the contents of an AFS volume accessible on one or more AFS File Server machines.

Because you are adding this AFS Server to an existing AFS cell, the root AFS volumes are probably already replicated, and the AFS Server Configuration Wizard indicates that you do not need to replicate the root AFS volumes.

Note: If for some reason the root AFS volumes are not yet replicated in this AFS cell, you can choose the **Yes, replicate the root volumes** option to replicate the AFS cell's root volumes on this AFS Server.

16. Choose the **Next** button. The System Control Service dialog box appears. In cells running the domestic version of AFS for Windows, the System Control Server distributes new versions of AFS Server configuration information to all AFS servers and the System Control Client machines obtain common AFS configuration files from the System Control machine. (Cells running the international version of AFS for Windows do not use the System Control Server to distribute system configuration files or the System Control Client to obtain these files.)
17. To configure this AFS Server as the System Control Server for the AFS cell, choose the **Configure as the System Control Server** option. To configure this AFS Server as a System Control Client, choose the **Configure as a System Control Client** option and enter the hostname of the System Control Server in this AFS cell. The AFS Server will obtain new versions of AFS Server configuration information from the server specified. If you do not want to configure this AFS Server as the System Control Server for the AFS cell or as a System Control Client, choose the **Do not configure as the System Control Client or Server** option.
18. Choose the **Next** button. The Configure the System dialog box appears. A list of the steps that will be taken to configure this AFS Server is displayed, enabling you to review the steps before starting the actual configuration process.

Note: To return to a previous step to review or modify your selections, choose the **Back** button.

19. To begin configuration of the AFS Server on this machine, choose the **Configure** button. If you are configuring the AFS Server into an AFS cell in which there are Database Servers running a version of AFS older than version 3.5, a dialog box appears prompting you to enter the AFS principal password.

The AFS Server is configured according to your specifications. The progress bar at the bottom of the dialog box indicates the steps in progress. A message box appears indicating that configuration is complete.

To Configure the AFS Control Center

Note: If you have installed the AFS Control Center in combination with the AFS Server, or the AFS Client, or both, then you do not need to configure the AFS Control Center. The AFS Control Center is automatically configured when the AFS Server or AFS Client is

configured. If you have installed the AFS Control Center only, then the Control Center must be configured on your system before it can be used.

1. From the **Start** menu, choose **Settings**, then choose **Control Panel**.
2. Double-click the **AFS Control Center** icon. The AFS Control Center Properties dialog box appears.
3. In the **Default Cell** box, enter the full name of the AFS cell to be administered by default.
4. If the cell to be administered by the AFS Control Center is not listed in the list of AFS cells, choose the **Add** button. The New Cell dialog box opens. Enter the cell name in the **AFS Cell** box and a short description in the **Description** box.
Choose the **Add** button. The Add Server dialog box opens. In the **Server Name** box, enter the name of a Volume Location Server in the selected cell. Choose **OK** to close the Add Server dialog box. Repeat this process, adding information for all Volume Location Servers in the cell. After all server information has been entered, choose **OK** to close the New Cell dialog box.
5. Choose **OK** to close the AFS Control Center Properties dialog box.

The AFS Control Center is now configured.

Uninstalling AFS for Windows

This section outlines uninstallation prerequisites, provides instructions for uninstalling AFS for Windows, and lists the changes that the uninstallation process makes to your system.

Reinstalling and Upgrading

On a Windows NT machine, it is *not* necessary to uninstall the components of AFS for Windows for the purpose of reinstalling or upgrading the software. To reinstall or upgrade AFS for Windows, follow the installation procedure described in “To Install AFS for Windows” on page 3. During the installation process, the previously-installed AFS components are replaced. AFS configuration information is preserved.

On a Windows 95 or Windows 98 machine, you must uninstall the previously-installed AFS Light component, as described in “To Uninstall AFS for Windows” on page 21, before reinstalling or upgrading AFS Light.

Uninstallation Prerequisites

Uninstalling AFS results in the deletion of all AFS application files. These files cannot be deleted if other applications are using them. For this reason, you must close all AFS dialog boxes before uninstalling AFS for Windows.

If you are uninstalling the AFS Server for the purpose of decommissioning the machine, the following prerequisites are necessary to avoid loss of data:

1. If the AFS Server is functioning as a File Server, move all read/write volumes to another AFS File Server, and remove all read-only volumes.
2. Unconfigure the AFS Server. Open the AFS Server Configuration utility and choose the **Server** tab. Clear all check boxes and choose **OK**.

To Uninstall AFS for Windows

1. From the **Start** menu, choose **Settings**, then choose **Control Panel**.
2. Double-click the **Add/Remove Programs** icon. The Add/Remove Programs Properties dialog box appears, displaying the **Install/Uninstall** tab.
3. Close the Control Panel.
4. Select the AFS component to be uninstalled, and select the **Add/Remove** button. The Confirm File Deletion dialog box appears, verifying that you want to remove the selected AFS for Windows component. Click **Yes** to continue with the uninstallation procedure.
5. An AFS message box appears asking if you want to preserve configuration information. Select **Yes** to preserve configuration information or **No** to delete all configuration information. (No configuration information is associated with the AFS Supplemental Documentation component. If you are removing this component from your system, the AFS message box does not appear.)
6. The Remove Programs from your Computer dialog box opens, displaying the components being removed from your system.

Note: A message box can possibly appear asking if you want to remove shared AFS files that are no longer needed by other components. Click **Yes To All** to completely remove the selected AFS component.

The selected AFS for Windows component is now uninstalled. If you installed a combination of AFS for Windows components, you must repeat Steps 4–6 to remove each component separately.

Changes Made to Your System

Changes made to your system by uninstalling the AFS Client

Uninstalling the AFS Client makes the following changes to your system:

- Removes all AFS Client files from the **\Program Files\Ibm\Afs\Client\Program** directory, removes the **Client** directory, and, if no other AFS components remain installed, removes the **Ibm** directory.

Note: The directories are *not* removed if they contain any files other than those installed by the AFS for Windows **setup** program.

- Removes the **IBM AFS** program group from the **Start** menu if no other AFS components remain installed.
- Removes the **AFS Client Configuration** icon from the Control Panel.
- Removes the AFS Menu from the Windows NT Explorer's context menu.
- Deletes the **IBM AFS Client** service.
- Removes AFS Client related registry entries from your system. Note that if you chose to preserve configuration information, some information remains in the registry after the uninstallation process.

Changes made to your system by uninstalling AFS Light

Uninstalling AFS Light makes the following changes to your system:

- Removes all AFS files from the **\Program Files\Ibm\Afs\Client\Program** directory and removes the **Ibm** directory.

Note: The directories are *not* removed if they contain any files other than those installed by the AFS for Windows **setup** program.

- Removes the **IBM AFS** program group from the **Start** menu.
- Removes the **AFS Light Configuration** icon from the Control Panel.
- Removes the AFS Menu from the Windows Explorer's context menu.
- Removes AFS Light related registry entries from your system. Note that if you chose to preserve configuration information, some information remains in the registry after the uninstallation process.

Changes made to your system by uninstalling the AFS Server

Uninstalling the AFS Server makes the following changes to your system:

- Removes all AFS Server files from the **\Program Files\Ibm\Afs\Server** directory, removes the **Server** directory, and, if no other AFS components remain installed, removes the **Ibm** directory.

Note: These directories are *not* removed if they contain any files other than those installed by the AFS for Windows **setup** program. Also, if you chose to preserve configuration information, some files in the **\Program Files\Ibm\Afs\Server** directory are *not* removed.

- Removes the **IBM AFS** program group from the **Start** menu if no other AFS components remain installed.
- Removes the **AFS Server Configuration** icon from the Control Panel.
- Deletes the **IBM AFS Server** service.
- Removes AFS Server related registry entries from your system. Note that if you chose to preserve configuration information, some information remains in the registry after the uninstallation process.

Changes made to your system by uninstalling the AFS Control Center

Uninstalling the AFS Control Center makes the following changes to your system:

- Removes all AFS Control Center files from the **\Program Files\Ibm\Afs\Control Center** directory, removes the **Control Center** directory, and, if no other AFS components remain installed, removes the **Ibm** directory.

Note: These directories are *not* removed if they contain any files other than those installed by the AFS for Windows **setup** program.

- Removes the **IBM AFS** program group from the **Start** menu if no other AFS components remain installed.
- Removes the **AFS Control Center** icon from the Control Panel. Note that this icon appears in the Control Panel only if no other AFS for Windows components are installed on your system.
- Removes AFS Control Center related registry entries from your system. Note that if you chose to preserve configuration information, some information remains in the registry after the uninstallation process.

Changes made to your system by uninstalling the AFS supplemental documentation

Uninstalling the AFS supplemental documentation makes the following changes to your system:

- Removes the **SysAdminGd** directory and the **CmdRef** directory from the **\Program Files\Ibm\Afs\Documentation\Html** directory, and, if no other AFS components remain installed, removes the **Ibm** directory.

Note: These directories are *not* removed if they contain any files other than those installed by the AFS for Windows **setup** program.

- Removes the **IBM AFS** program group from the **Start** menu if no other AFS components remain installed.
- Removes AFS supplemental documentation related registry entries from your system.

Index

A

AFS

client

overview 2

components 2

configuration

AFS Client 9

AFS Control Center 19

AFS Light 11

AFS Light Gateway 9

AFS Server 12

overview 8

control center

overview 2

installation options 2

installation procedure 3

light

overview 2

overview 1

reinstalling 20

server

overview 2

supplemental documentation

component 2

uninstallation prerequisites 21

uninstallation procedure 21

upgrading 3

AFS Client

setup.co file 3

client-only installation 3

configuration 9

configure as AFS Light

Gateway 9

installation 3

overview 2

uninstallation 21

AFS Control Center

configuration 19

installation 3

overview 2

uninstallation 21

AFS Light

configuration 11

gateway machine 11

installation 3

overview 2

uninstallation 21

AFS Light Gateway

authenticating AFS Light

users 10

configuration 9

synchronizing the cell

database 10

AFS partitions 14

AFS Server

configuration

as first server in a cell 12

as server in an existing

cell 16

overview 12

installation 3

overview 2

uninstallation 21

audience 1

B

Backup Server

configuring in a new cell 14

configuring in an existing

cell 17

C

CD-ROM documentation 8

client

overview 2

client-only installation 3

configuration 8

control center

overview 2

D

Database Server

configuring in a new cell 14

configuring in an existing

cell 17

documentation

CD-ROM 8

online 7

online help 8

domain user accounts 10

F

File Server

configuring in a new cell 13

configuring in an existing

cell 16

G

gateway machine name 11

generic administrative account 13

I

installation

changes made to your system 4

client-only installation 3

possible component

combinations 2

procedure 3

upgrading from an earlier

version 3

installation options 2

installation procedure 3

L

light

overview 2

M

machine user accounts 10

O

online documentation 7

online help 8

overview

AFS 1

document 1

R

reinstalling 20

replication

when configuring a new cell 15

root.afs 15

root AFS volumes

when configuring a new cell 15

when configuring a server in an

existing cell 18

root.cell 15

S

server

overview 2

setup.co file 3

System Control Server

in a new AFS cell 15

U

uninstallation

- changes made to your system 21
- overview 20
- prerequisites 21
- procedure 21

uninstallation prerequisites 21

uninstallation procedure 21

upgrading 3

Notices

First Edition (April 2000)

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the document. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licenses of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation
ATTN: Software Licensing
11 Stanwix Street
Pittsburgh, PA 15222-1312
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM International Program License Agreement or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples may include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Trademarks

The following terms are trademarks of International Business Machine Corporation in the United States, other countries, or both:

AFS	IMS
AIX	MQSeries
AS/400	MVS/ESA
CICS	OS/2
CICS OS/2	OS/390
CICS/400	OS/400
CICS/6000	PowerPC
CICS/ESA	RISC System/6000
CICS/MVS	RS/6000
CICS/VSE	S/390
CICSplex	Transarc
DB2	TXSeries
DCE Encina Lightweight Client	VSE/ESA
DFS	VTAM
Encina	VisualAge
IBM	WebSphere

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries or both.

Sun, SunLink, Solaris, SunOS, Java, all Java-based trademarks and logos, NFS, and Sun Microsystems are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

UNIX is a registered trademark in the United States, other countries or both and is licensed exclusively through X/Open Company Limited.

Other company, product, and service names may be trademarks or service marks of others.



Part Number: CT6Q8NA
Program Number:

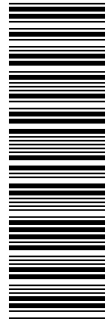


Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

SC09-4564-00



CT6Q8NA



Spine information:



AFS for Windows

Quick Beginnings

Version 3.6

SC09-4564-00