



Installing and Administering an AnswerBook2 Server

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Preface

This book provides information on installing and administering an AnswerBook2 documentation server.

Who Should Use This Book

Anyone who installs or administers AnswerBook2 software might need to use this book.

How This Book Is Organized

This book contains the following information:

- Chapter 1 provides an introduction to the AnswerBook2 product.
- Chapter 2 explains how to install the AnswerBook2 server software and document collections.
- Chapter 3 explains how to administer a documentation server.
- Chapter 4 identifies some known areas of confusion and how to respond to them.
- Appendix A is the reference manual page for the `ab2admin` command-line interface.
- Appendix B is the reference manual page for the `ab2regsvr` utility.
- Appendix C shows a sample installation of the server software packages using the `pkgadd` utility.

- *Glossary* lists terms and definitions associated with the product.

Ordering Sun Documents

The Sun Software Shop stocks select manuals from Sun Microsystems, Inc. You can purchase individual printed manuals and AnswerBook2™ CDs.

For a list of documents and how to order them, visit the Software Shop at <http://www.sun.com/software/shop/>.

Introduction

This chapter introduces the AnswerBook2™ documentation server. It includes the following information:

- “AnswerBook2 Administration Overview” on page 1
- “AnswerBook2 Administration Features” on page 1
- “AnswerBook2 Pieces and Parts” on page 2
- “What to Install” on page 2
- “Frequently Asked Questions” on page 3

For information about using the AnswerBook2 product to view online documentation, see *Viewing Online Documentation Using the AnswerBook2 System*.

AnswerBook2 Administration Overview

The AnswerBook2 product is the Sun online documentation system. It is a client-server based system in which the client is any HTML 3.2-compliant web browser and the server is an httpd-based web server. You can install AnswerBook2 document collections on a centralized documentation server or on a local server.

AnswerBook2 Administration Features

The AnswerBook2 product includes the following administration features:

- Uses a client-server architecture that enables the documents to be stored in a single location (server) and accessed from the user’s desktop (client)

- Provides a command-line interface (`ab2admin`) and a browser-based interface (AnswerBook2 Administration page) for performing server administration functions
- Can run as a CGI process on various web servers
- Lets you control whether errors are displayed visually to the users with a red “BUG,” by turning on or off the AnswerBook2 debugging function
- Includes log files for server access and errors

AnswerBook2 Pieces and Parts

The AnswerBook2 product consists of the following elements:

- A documentation server — Performs query functions and “serves” documents to the client browser. Includes templates that provide a common “look and feel” for document viewing and printing; and provides both web-browser and command-line administration interfaces that perform database, password authentication, and other administrative functions. For information on installing a documentation server, see “Installing AnswerBook2 Software” on page 10. For information about administering a documentation server, see Chapter 3.
- Document collections — Can be new (SGML) documents or old (Display PostScript™) documents. For information about installing document collections onto your server, see “Installing Document Collections” on page 13.
- A client web browser — To view the documentation, users can use any HTML 3.2-compliant browser. For information about viewing documentation, see *Viewing Online Documentation Using the AnswerBook2 System*. To enable users to access your documentation server, either you need to register the server with Federated Naming Service (FNS) or users need to know your server’s URL. For information about registering your server with FNS, see “Registering Your Documentation Server” on page 15.

What to Install

The following table indicates what you need to do or install to provide specific AnswerBook2 functionality.

TABLE 1-1 When and What to Install

| If you want to do this... | Then do this... |
|---|--|
| View online documentation from a client browser (any platform, any operating environment). | Start an HTML 3.2-compliant web browser and enter the documentation server's URL (for example, <code>http://imaserver:8888/</code>). |
| Enable your system (machine) to deliver (serve) documentation. | Install the documentation server software. See Chapter 2. |
| Add documentation from product CDs, web sites, or other sources to your documentation server. | The document collection packages should include post-install procedures that add them to the documentation server's database. If you have document collections pre-installed on the documentation server, use the "add collection" functions to add the document collections to the server's database. See "Installing Document Collections" on page 13. |

Frequently Asked Questions

This section lists some common questions about the AnswerBook2 product along with answers to those questions.

What is the AnswerBook2 product?

The AnswerBook2 product uses a standards-based documentation server to deliver Sun online documentation through your favorite web browser. The AnswerBook2 interface lets you browse, search, and print a variety of information, including AnswerBook1 collections and man pages.

How does the AnswerBook2 product differ from the AnswerBook product?

The previous AnswerBook product (now called AnswerBook1) used Display PostScript to display electronic versions of documents primarily developed for paper delivery. The AnswerBook2 product uses a web browser to display documentation developed for online delivery using SGML and to display existing AnswerBook1 documents.

The following list identifies some key differences between the products:

- Web-browser interface — You can use any HTML 3.2-compliant browser on any platform to view online documentation with the AnswerBook2 product.
- Source flexibility — The documentation server can deliver AnswerBook1 (Display PostScript) documents or AnswerBook2 (SGML) documents.
- Client-server support — The AnswerBook2 product allows you to install the server and document collections in a central location and view the documents from other systems. In addition, it includes a “fail-over” mechanism through which the document administrator can define multiple documentation servers so that links between documents always work.
- Cross-platform — For this release, the AnswerBook2 documentation server must run in the Solaris 2.5.1 operating environment or compatible version (SPARC or Intel). However, AnswerBook2 clients can run on any platform, and future releases might provide server functionality on additional platforms.
- Default search behavior — The AnswerBook2 product uses AND for its default search behavior rather than OR (the default search behavior in the AnswerBook1 product).

Can I still view my old AnswerBook collections with the AnswerBook2 product?

Yes, unless your old AnswerBook documents were created before the release of the Solaris 2.2 operating environment. To add AnswerBook1 collections to the documentation server’s database, the document administrator uses the AnswerBook2 “add collection” function and points to the directory containing the AnswerBook1 `ab_cardcatalog` file.

Does the AnswerBook2 product provide the same functionality for AnswerBook1 and AnswerBook2 documents?

No. For consistency, the AnswerBook2 interface for AnswerBook1 documents is similar to the AnswerBook1 product interface. The following briefly lists the differences in functionality for AnswerBook1 and AnswerBook2 collections:

- You cannot show or hide all levels of an entire AnswerBook1 table of contents listing; you can only show or hide details for a specific section within the table of contents.
- AnswerBook1 content pages do not include Other Topics sections. To navigate from one page to another, you can use the Next Topic link or return to the Table of Contents and select another section in the book.
- AnswerBook1 content pages display the entire chapter at one time, not smaller sections.
- Search results icons poorly represent the probability of a match for AnswerBook1 information; the icons tend to be either completely filled or completely empty.
- Search terms are not highlighted in AnswerBook1 text.

- Some AnswerBook1 graphics cannot be displayed inline; they are identified by an icon that you can click to display a PostScript image of the graphic.
- A Man Pages by Keyword search includes only the AnswerBook2 (SGML-based) man pages on the server, not the AnswerBook1 man pages.
- The AnswerBook1 man pages use the same interface as other AnswerBook1 documents; they do not have a special man page interface.

Installing AnswerBook2 Server Software

This section explains how to install the AnswerBook2 server software.

Note - To view online documentation as an AnswerBook2 client, no installation is required; you need to know the URL for a documentation server or, if you have Internet access, you can view released Sun documentation at the URL: <http://docs.sun.com/>

Note - There is no client-level access control for this product. If a client machine can access the URL for a documentation server, it can view the documents on that server.

This section contains the following information:

- “Important — Operating Environment Constraints” on page 8
- “Pre-installation Checklist” on page 8
- “Obtaining AnswerBook2 Software” on page 10
- “Installing AnswerBook2 Software” on page 10
- “Installing Document Collections” on page 13
- “Registering Your Documentation Server” on page 15
- “Running the AnswerBook2 Server as a CGI Process” on page 18

Important — Operating Environment Constraints

The AnswerBook2 server can run on Solaris 2.5.1 operating environment (or compatible version). However, the specific operating environment version constrains your installation in these areas:

1. Support for multi-byte character languages, such as those used in many Asian locales — The Solaris operating environment uses a utility (`iconv`) that converts characters from one code set to another. If you are running the Solaris 2.5.1 operating environment, you might need to install or update these packages:
 - `SUNWciu8` — Simplified Chinese `iconv` modules for UTF-8
 - `SUNWhiu8` — Traditional Chinese `iconv` modules for UTF-8
 - `SUNWjiu8` — Japanese `iconv` modules for UTF-8
 - `SUNWkiu8` — Korean `iconv` modules for UTF-8
 - `SUNWui8` — Generic `iconv` modules for UTF-8
2. Support for Federated Naming Services (FNS) — If you want to register your AnswerBook2 server so that users can access it “automatically,” you need to have FNS installed on your system. This utility is not part of the core Solaris 2.5.1 operating environment, so you might need to install the `SUNWfns` package.

Pre-installation Checklist

Using this checklist will simplify your installation process.

Is your system compatible with the AnswerBook2 software?

For your system to function as a documentation server, it must match one of the following system configurations:

- SPARCstation™ 2 (minimum, SPARCstation 5 recommended) system running the Solaris 2.5.1 SPARC Platform Edition operating environment (or compatible version)
- Intel-based personal computer system running the Solaris 2.5.1 Intel Platform Edition operating environment (or compatible version)

In addition, your server system must have approximately 34 Megabytes of disk space available for the server software and roughly 600 Megabytes of disk space available for installing document collections.

To access a documentation server through a web browser and URL, there are no specific system requirements, although you must be running an HTML 3.2-compliant browser, such as Netscape Navigator™ or Lynx.

What software components do you need to install?

The components you need to install depend on what you want to do.

- To read online documentation, if an AnswerBook2 server is already installed somewhere in your organization, simply launch an HTML 3.2-compliant browser and enter the URL to the server (such as `http://imaserver:8888/`). To view released Sun documentation, use the URL: `http://docs.sun.com/`
- To enable your system to “serve” documentation, install documentation server software and document collections on your system. You can also choose to install the server software on one system and the document collections on another. See “Installing AnswerBook2 Software” on page 10 and “Installing Document Collections” on page 13.

Where is the software?

The AnswerBook2 server software is available from various locations, such as the Solaris Documentation CD, other Sun CDs, or directly from Sun web sites. As a result, the exact steps you need to take to access the packages will differ slightly, depending on your particular situation. Throughout the installation procedure, *software-location* indicates those places where you will need to use whatever is appropriate for your situation.

Are you already running a web server on this system?

By default, the AnswerBook2 documentation server runs as an NSAPI plug-in on top of the `httpd` server that is included in the `SUNWab2u` package. Because the AnswerBook2 server complies with standard web protocols, you can choose to run the documentation server as a CGI (Common Gateway Interface) process on top of some other web server already on your system (for example, Netscape Server or Sun WebServer™). See “Running the AnswerBook2 Server as a CGI Process” on page 18.

Do you want other users within your organization to be able to find your server?

To give users the ability to locate your documentation server without knowing the URL, you can register the name of your server with the FNS system. Users can still access unregistered documentation servers if they know the appropriate URLs. See “Registering Your Documentation Server” on page 15.

Obtaining AnswerBook2 Software

The AnswerBook2 software is included on several Sun product CDs, such as the Solaris 7 Documentation CD. If you have a product CD that contains the software or have downloaded the `SUNWab2r`, `SUNWab2s`, and `SUNWab2u` packages from a Sun web site, go to “Installing AnswerBook2 Software” on page 10. Otherwise, you need to get the AnswerBook2 software before continuing.

Installing AnswerBook2 Software

Note - Some product CDs that include the AnswerBook2 software support a point-and-click installation utility (Solaris Web Start). For information on using that utility, see the documentation that comes with the CD.

▼ To Install AnswerBook2 Server Software

1. Log in as superuser on the documentation server machine.

You can log in as `root` from the Desktop Login screen, or type `su` at the command line then enter your system's `root` password:

2. Insert the CD into your CD-ROM drive or go to the location of the software.

If installing from a CD, the Volume Manager should automatically mount the CD.

3. Change directory to the location of the documentation server packages, if needed.

Enter this command:

```
# cd software-location
```

where *software-location* depends on whether you are installing from a CD or have obtained the packages from a web site. For example, the *software-location* for the Solaris 7 Documentation CD defaults to

```
/cdrom/sol_7_doc/Solaris_2.7_Doc/sparc/Product/.
```

4. Launch the installation utility and select the server software packages.

For example, use the following command to launch the `pkgadd` utility:

```
# pkgadd -d .
```

Select these server software packages:

- `SUNWab2r` (0.03 Megabytes) — Installs in the root partition and provides configuration and start-up files. Do not install this package to a non-default location.
- `SUNWab2s` (1.40 Megabytes) — Provides shared files for performing document processing. Do not install this package to a non-default location.
- `SUNWab2u` (30.00 Megabytes) — Provides executable and back-end processing files for server and administration functions. To install this package to a non-default location, use the interactive form of the `pkgadd` command:

```
# pkgadd -a none -d .
```

5. Answer superuser prompts when appropriate.

When you see a message similar to the following:

```
This package contains scripts which will be executed with super-user  
permission during the process of installing this package.
```

```
Do you want to continue with the installation [y,n,?]
```

Respond `y`.

6. Start up the server, if needed.

Upon completion of the `SUNWab2u` installation process, a script attempts to start the server on the default port of 8888. To verify that the server has started, use one of the following methods:

- Start an HTML 3.2-compliant web browser and type the following URL:
`http://localhost:8888/`

You should see an “AnswerBook2 Library” page with at least one document collection (the AnswerBook2 Help Collection), depending on what collections are installed.

- Look for the server process using the following command:

```
# ps -eaf | grep dwhttpd
```

If the server is not started, use the following command to start it:

```
# /usr/lib/ab2/bin/ab2admin -o start
```

7. Upon completion of the installation process, your server starts up using default configuration information.

For information about changing your server’s configuration, see the following:

- To change standard server configuration parameters, such as the port number, use either the `ab2admin` command-line interface or the AnswerBook2 Administration page. See Appendix A or Chapter 3.
- To run the AnswerBook2 server on an existing `httpd` server, such as Sun WebServer or Netscape Server, you must install the standard documentation server software, then change several configuration files and create links to run the documentation server as a CGI process. See “Running the AnswerBook2 Server as a CGI Process” on page 18.

8. Install the document collections.

If document collections are installed on your server, the installation process looks for them and adds them to the server’s database. You can install collections from product CDs or update the server’s database to recognize existing document collections installed on other systems. See “Installing Document Collections” on page 13.

9. (Optional) Register the server.

If you want other users to automatically find your documentation server through Federated Naming Service (FNS), you need to register the server. To register your server, use the following command:

```
# /usr/lib/ab2/bin/ab2regsvr server_url
```

where *server_url* is the fully qualified URL to get to this server (for example: `http://imaserver.eng.sun.com:8888/`). See “Registering Your Documentation Server” on page 15 for more information.

Installing Document Collections

Note - Some product CDs that include the AnswerBook2 software support a point-and-click installation utility (Solaris Web Start). For information on using that utility, see the documentation that comes with the CD.

Your documentation server cannot do its job if no documents are installed for it to serve.

▼ To Install Document Collections

1. Log in as superuser on the documentation server machine.

You can log in as `root` from the Desktop Login screen, or type `su` at the command line then enter your system's `root` password:

2. Insert the CD into your CD-ROM drive or go to the location of the software.

If installing from a CD, the Volume Manager should automatically mount the CD.

3. Go to the location of the document collection packages.

You can install collections from the *software-location* or from other locations, such as existing document collections or collections that come on other CDs.

Type this command:

```
# cd software-location
```

where *software-location* depends on whether you are installing from a CD or have obtained the packages from a web site. For example, the *software-location* for the Solaris 7 Documentation CD defaults to

```
/cdrom/sol_7_doc/Solaris_2.7_Doc/common/Product/.
```

4. Launch the installation utility and select document collection packages to install.

For example, to launch the `pkgadd` utility:

```
# pkgadd -d .
```

For a detailed list of document collections included on a specific CD, see the `README` file located on that CD.

5. AnswerBook2 document collection packages should include a post-install script that adds the collections to the server's database and restarts the server.

If this does not happen or if you install AnswerBook1 collection packages, you need to use either the AnswerBook2 Administration page's Add Collection to List function or the `ab2admin -o add_coll` command to add these collections to the documentation server's database.

If you have document collections already installed on your system, you can use either the AnswerBook2 Administration page's Scan for Locally Installed Collections function or the `ab2admin -o scan` command to have them found and added to the documentation server's database. This function only works for locally installed packages.

To serve document collections located on some other system, use the Add Collection to List function or the `ab2admin -o add_coll` command and provide the full path name to the `ab_cardcatalog` or `collinfo` file. For example, if the documentation server is `imaserver` and you want it to serve document collections located on the system `elsewhere`, you might use the following command:

```
imaserver# ab2admin -o add_coll -d /net/elsewhere/books/SUNWdtad/collinfo
```

Registering Your Documentation Server

To give users the ability to locate your documentation server without knowing the URL, you can register the name of your server with the FNS system. Users can still access unregistered documentation servers if they know the URL.

How you register your server depends on two things:

- Your familiarity with FNS commands

If you are familiar with standard FNS commands, such as `fnbind`, you can use those commands to register the server. However, to simplify the registration process, the `/usr/lib/ab2/bin/ab2regsvr` command can take care of registering your server for you. For more information, see “Registering Your Server Using the `ab2regsvr` Command” on page 15 and “Registering Your Server Using Standard FNS Commands” on page 16.

- What name service you are using

NIS+ (*Network Information Service Plus*) is the primary name service used for the Solaris 2.6 or compatible operating environment. If your system is using NIS+ and you have administrative privileges, you can register the server while logged in on either the NIS+ master or NIS+ client system.

NIS (*Network Information Service*) was the standard name service provided in SunOS™ 4.x (Solaris 1.x) environments. If your system is using NIS, you must be logged in as `root` on the NIS master system to register the documentation server.

The AnswerBook2 product also works with a file-system defined naming system (*files*) in which all names are manually entered into data files. These files are stored in the directory `/var/fn/`. In this case, to be able to register the server, you must have root access to the system and registration applies only on the machine on which it is registered. Other machines cannot see a server registered under a file system mechanism.

Registering Your Server Using the `ab2regsvr` Command

To register your server, use the `ab2regsvr` command. The `ab2regsvr` command looks at your system’s configuration and sets up the appropriate name space for your server.

To register your server, use the following command:

```
# /usr/lib/ab2/bin/ab2regsvr server_url
```

where *server_url* is the fully qualified URL to get to this server (for example: `http://imaserver.eng.sun.com:8888/`).

The `ab2regsvr` command also provides some other options you might find useful:

- To view a list of registered AnswerBook2 server URLs:

```
# /usr/lib/ab2/bin/ab2regsvr -l
```

- To remove a registered server from the list:

```
# /usr/lib/ab2/bin/ab2regsvr -d
```

- To change the URL for the currently registered AnswerBook2 server:

```
# /usr/lib/ab2/bin/ab2regsvr -r server_url
```

where *server_url* is the new URL to get to this server (for example: `http://aserver.eng.sun.com:8888/`). This replaces any existing URLs with the specified URL.

For more information about the `ab2regsvr` command, see Appendix B.

Registering Your Server Using Standard FNS Commands

If you want to use FNS commands to register your server and you already have FNS installed at your location, use the following command to register the specified URL as a documentation server for your organization (domain):


```
# fnbind -r thisorgunit/server/answerbook2 onc_answerbook2 \  
onc_addr_answerbook2 server_url
```

where *server_url* is the fully qualified URL to get to this server (for example: `http://imaserver.eng.sun.com:8888/`).

To find out what servers are currently registered, use the following command:

```
% fnlookup -v thisorgunit/service/answerbook2
```

This returns a list of registered servers that looks similar to the following:

```
Reference type: onc_answerbook2  
Address type: onc_addr_answerbook2  
length: 19  
data: 0x68 0x74 0x74 0x70 0x3a 0x2f 0x2f 0x61 0x6e 0x73 http://ans  
0x77 0x65 0x72 0x73 0x3a 0x38 0x38 0x38 0x38 wers:8888
```

In this example, the registered server is `http://answers:8888/`.

If you get a response similar to the following, then no documentation servers are registered with FNS:

```
Lookup of 'thisorgunit/service/answerbook2' failed: \  
Name Not Found: 'answerbook2'
```

For more information about FNS, including how to install it, see the FNS documentation.

Name Services and AnswerBook2 Users

In the Solaris 2.6 or Solaris 7 operating environment, the user can define a default AnswerBook2 server using the environment variable `AB2_DEFAULTSERVER`. For example, the user could have the following line in the `.cshrc` file:

```
setenv AB2_DEFAULTSERVER http://imaserver.eng.sun.com:8888
```

If the user has not defined an environment variable, when the user launches the AnswerBook2 product from the desktop, the product looks to see if the system from which it was launched is running a documentation server. If so, it launches using the URL: `http://localhost:port`, where *port* defaults to 8888.

If the user has not defined an environment variable and the current system is not a documentation server, when the user launches AnswerBook2 from the desktop, the system performs an `fnlookup thisorgunit/service/answerbook2` command to find out what documentation servers are available. It then chooses one of those servers and launches the AnswerBook2 browser using that server name for the URL.

Running the AnswerBook2 Server as a CGI Process

By default, the AnswerBook2 documentation server runs as an NSAPI plug-in on top of the `httpd` server that is included in the `SUNWab2u` package. Because the AnswerBook2 server complies with standard web protocols, you can choose to run the documentation server as a CGI (Common Gateway Interface) process on top of some other web server already on your system (for example, Netscape Server or Sun WebServer).

Note - Changing the server behavior at this level assumes “expert” web knowledge. You should not attempt to perform this task unless you are already thoroughly familiar with your web server’s configuration and unique requirements.

Be aware that the following functions will not work if you change from the default AnswerBook2 web server:

- `/usr/lib/ab2/bin/ab2admin -o start`
- `/usr/lib/ab2/bin/ab2admin -o stop`
- `/etc/init.d/ab2mgr start`
- `/etc/init.d/ab2mgr stop`
- restart from the AnswerBook2 Administration page
- Autostart features

You will need to use your server’s start and stop functions instead.

▼ To Change to a CGI-based Server

Note - Because web server technology changes rapidly, all possible configurations of web servers cannot be documented here. As a result, the following general procedure is a guideline for how to proceed. You should be thoroughly familiar with your web browser's configuration and unique requirements before performing this procedure.

This procedure describes the general steps you need to follow to use a CGI-based web server rather than the default (NSAPI plug-in) server.

1. Disable automatic startup of the AnswerBook2 server when the system is rebooted.

Use either the Modify Server Configuration page of the AnswerBook2 Administration page or use the following command:

```
# /usr/lib/ab2/bin/ab2admin -o autostart_no
```

2. Turn off administrative access control for the default document server.

Use the following command:

```
# /usr/lib/ab2/bin/ab2admin -o access_off
```

3. Shut down the AnswerBook2 server if it is running.

Use one of the following commands:

```
# /usr/lib/ab2/bin/ab2admin -o stop  
# /etc/init.d/ab2mgr stop
```

4. Edit your web server's configuration file and make icons available.

Your web server's documentation should explain specific details, such as where to find the configuration file. The entry `/icons/` should be modified to point to `/usr/lib/ab2/data/docs/icons/`.

If `/icons/` is already being used, link all files in `/usr/lib/ab2/data/docs/icons/` to the existing `/icons/` directory.

When you have made this change, restart your server.

To verify your changes, type the following URL in your web browser to see a

Help icon :


```
http://localhost:port/icons/ab2_help.gif
```

where *port* is the port number on which your documentation server is running.

5. Link AnswerBook2 Help documents to the current documentation root.

Go to your web server's documentation root directory and create a symbolic (soft) link to `/usr/lib/ab2/data/docs/Help`.

To verify your changes, type the following URL in your web browser to see a

Help icon :

```
http://localhost:port/Help/C/Help/books/AB2ADMIN/figures/ab2_help.gif
```

where *port* is the port number on which your documentation server is running.

6. Make AnswerBook2 cgi files available to your server.

Go to your web server's `cgi-bin` directory and create symbolic links to the following:

```
/usr/lib/ab2/bin/ab2bin/admin  
/usr/lib/ab2/bin/ab2bin/nph-dweb  
/usr/lib/ab2/bin/ab2bin/gettransbitmap  
/usr/lib/ab2/bin/ab2bin/getepsf  
/usr/lib/ab2/bin/ab2bin/getframe
```

To verify your changes, type the following URL in your web browser to see the AnswerBook2 Library page:

`http://localhost:port/cgi-bin/nph-dweb/ab2`

where *port* is the port number on which your documentation server is running.

7. Edit your server's configuration file and map /ab2/ to call AnswerBook2 cgi.

Your web server's documentation should explain specific details, such as where to find the configuration file. You need to change the entry for /ab2/ to `/usr/lib/ab2/bin/ab2bin/nph-dweb/ab2/`.

To verify your changes, restart your server and type the following URL in your web browser to see the AnswerBook2 Library page:

`http://localhost:port/ab2`

where *port* is the port number on which your documentation server is running.

8. If you want users to access the documentation server without having to specify /ab2 at the end of the URL, edit your server's configuration file and map / to /ab2/.

Your web server's documentation should explain specific details, such as where to find the configuration file. You need to change the entry for / to `/ab2/` and add a `remote` flag to the mapping.

To verify your changes, restart your server and type the following URL in your web browser to see the AnswerBook2 Library page:

`http://localhost:port`

where *port* is the port number on which your documentation server is running.

9. Edit the AnswerBook2 administration configuration file.

You need to edit the `/usr/lib/ab2/bin/ab2bin/nph-dweb` file and change the entries for `servertime`, `errorlog`, and `accesslog`.

```
setenv servertype server_type
setenv errorlog complete_path_to_error_log
setenv accesslog complete_path_to_access_log
```

where:

- *server_type* identifies the server you are running, such as `sWS`.
- *complete_path_to_error_log* is the path to your web server's error log.
- *complete_path_to_access_log* is the path to your web server's access log.

10. Set up access control to the AnswerBook2 Administration interface.

To control who can perform administrative functions on the document server, use your http server's appropriate access control mechanisms to restrict access to the following URL: `/ab2/@Ab2Admin`

Administering an AnswerBook2 Server

Administering AnswerBook2 software consists of performing the following functions, each of which includes specific tasks:

- “Administering the Documentation Server” on page 23
- “Starting and Stopping the Documentation Server” on page 24
- “Turning On or Off Document Source Debugging” on page 25
- “Controlling Administrative Access” on page 26
- “Working with Document Collections” on page 29
- “Viewing Documentation Server Configuration” on page 32
- “Working with Other Documentation Servers” on page 38
- “Working With Server Reports” on page 40
- “Common Administration Page Navigation Functions” on page 44

Administering the Documentation Server

The AnswerBook2 software provides a web-browser interface (the AnswerBook2 Administration page) and a command-line interface (`ab2admin`) that you can use to administer the documentation server. Most functions are available in either interface.

Note - If the documentation server is running from a CD-ROM, administration functions are not available.

To access the main AnswerBook2 Administration page, select AnswerBook2 Administration from the Options page of the AnswerBook2 browser or access the URL: `http://server:port/ab2/@Ab2Admin`, where *server* is the name of your server and *port* is the number of the port on which the server is running. All pages in the Administration page include common page navigation functions across the top of the page.

To access the command-line interface, use the `/usr/lib/ab2/bin/ab2admin` command. For detailed information about the command-line interface, see Appendix A.

Note - Only authorized administrative users can access the administrative functions. For more information, see “Controlling Administrative Access” on page 26.

Starting and Stopping the Documentation Server

When you boot the system on which the documentation server is running, the server can be started automatically (through the `/etc/init.d/ab2mgr` script). You can also manually start, stop, and restart the documentation server when needed. For example, you must restart the documentation server after you install a new document collection.

To perform these functions, log in as `root` on the documentation server machine and use the `ab2admin` command-line interface.

- To start the documentation server, use the following command:

```
# /usr/lib/ab2/bin/ab2admin -o start
```

- To stop the documentation server, use the following command:

```
# /usr/lib/ab2/bin/ab2admin -o stop
```

- To restart the documentation server, use the following command:


```
# /usr/lib/ab2/bin/ab2admin -o restart
```

If restarting the server does not supply the expected behavior, stop and start the server.

- To start the documentation server with debugging enabled, use the following form of the start-up command:

```
# /usr/lib/ab2/bin/ab2admin -o start -D
```

- To stop the server from starting up automatically when the system is rebooted, use this command:

```
# /usr/lib/ab2/bin/ab2admin -o autostart_no
```

Turning On or Off Document Source Debugging

The AnswerBook2 server has a debugging option that, when enabled, displays unrecognized markup in the book source in red with the word “BUG” in the viewer. This function helps to identify problems if a book does not display as expected.

To turn on debugging, log in as `root` to the documentation server’s system and set the environment variable `AB2_DEBUG` to 1. For example:

```
% su -  
# setenv AB2_DEBUG 1
```

To turn off debugging, log in as `root` to the documentation server’s system and set the environment variable `AB2_DEBUG` to 0. For example:

```
% su -  
# setenv AB2_DEBUG 0
```

Note - After you change the debugging parameter, you *must* restart the documentation server. To restart the documentation server, type:

```
# /usr/lib/ab2/bin/ab2admin -o restart
```

To control debugging when you start up the server, use the following form of the start-up command:

```
# /usr/lib/ab2/bin/ab2admin -o start -D
```

Controlling Administrative Access

An administrative user is a user specifically defined for performing document administrative functions. The AnswerBook2 product uses passwords to verify that a given administrator is allowed to perform administrative functions on the server.

Setting Up Initial Administrative Access

The AnswerBook2 software comes with access control turned on for performing administrative functions, but with no default administrative user defined. The first time you attempt to access the AnswerBook2 administrative functions, the software informs you that access control is turned on but no user is defined. You can do one of two things at this point:

- Turn off access control.

To turn off access control, log in as `root` on the documentation server machine and type the following:

```
# /usr/lib/ab2/bin/ab2admin -o auth_off
```



Caution - If you turn off access control, any user who can access your documentation server can modify your documentation server.

- Define an administrative user and password.

To define an administrative user, log in as `root` on the documentation server machine and type the following:

```
# /usr/lib/ab2/bin/ab2admin -o add_admin -u admin-id
```

where *admin-id* is the login ID for administering this documentation server. The *admin-id* does not have to match the user's system login ID; it is solely an ID for performing document-related administrative functions on a specific server.

The software prompts you to enter a password for this user, then re-enter it for verification.

Adding Access for AnswerBook2 Administrators

To add an administrative user, select Add Administrator from the AnswerBook2 Administration page. To add the administrative user:

1. **Type the administrator's login ID in the Administrator ID field.**

The *admin-id* does not have to match the user's system login ID; it is solely an ID for performing document-related administrative functions on a specific server.

2. **Type a password for the administrator.**

This password is stored in an AnswerBook2 password database. It does not have to match the user's system password.

Note - You need to enter the password twice for verification.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o add_admin -u admin-id [-m server_name] [-p server_port]
```

Changing the Password for an Administrator

To change an administrator's password, select Change Password from the AnswerBook2 Administration page. To modify the password:

1. **Select the administrative user from the Administrator ID pop-up list.**
2. **Type the administrator's existing password in the Old Password field.**
3. **Type the administrator's new password in the New Password field.**
4. **Type the administrator's new password a second time in the Re-enter New Password field.**
5. **Click Change Password to apply this change.**

When you click Change Password, the AnswerBook2 software checks to see that the data entered in the New Password and Re-enter New Password fields agree. If they do, the new password is stored in the database. If they do not, the software displays an error.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o change_password -u admin-id [-m server_name] [-p server_port]
```

Removing Access for an Administrator

To remove a user from the list of administrative users for this server, select Delete Administrator from the AnswerBook2 Administration page. To remove the administrator:

1. **Click the checkbox next to the administrator's login ID that you want to remove from the List of Administrators.**

This is the administrator's ID, not necessarily the person's system or user ID.

2. **Click Delete Administrator.**

Note - This has no effect on the person's ability to access AnswerBook2 documents as a user. It only removes the person's ability to perform administrative functions.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o del_admin -u admin-id [-m server_name] [-p server_port]
```

Working with Document Collections

An AnswerBook2 *collection* is a logical grouping of books. For example, you might have a collection that contains all Solaris™ developer-oriented books. This collection can be an AnswerBook2 (SGML) collection or an AnswerBook1 (Display PostScript™) collection.

Listing Collections

To see a list of all collections installed on your server, select View List of Available Collections from the AnswerBook2 Administration page. This list includes AnswerBook1 collections and AnswerBook2 collections.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o list [-m server_name] [-p server_port]
```

Adding New Collections

To add a collection to the server's database, select Add Collection to List from the AnswerBook2 Administration page. This function assumes the collection already exists as an installed package on the server's system or some other system to which the server has access. If the collection is not yet installed, use `pkgadd` to add the collection first, then use this function. For new collections (those that are on the Solaris 2.6 Documentation CD, for example), if you run the `pkgadd` command on the server, it adds the collections to the server's list automatically.

Perform the following steps to install the collection:

- 1. Type a valid path to the collection file in the Path to Collection field.**

For example,

`/opt/answerbooks/english/solaris_2.7/SUNWaman/collinfo`. The path must point to a directory that contains either a `collinfo` file for an AnswerBook2 collection or an `ab_cardcatalog` file for an AnswerBook1 collection.

- 2. Click Add Collection.**

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o add_coll -d path_to_collection
```

Note - After you install a collection, you *must* restart the documentation server. To restart the documentation server, click Restart on the Administration page's status page or type the following from the command line:

```
# /usr/lib/ab2/bin/ab2admin -o restart
```

Adding Existing Collections

The AnswerBook2 server can scan your current system to find locally installed AnswerBook1 and AnswerBook2 collections and add them to the server's database. To have the server perform this function for you, select Scan for Locally Installed Collections from the AnswerBook2 Administration page. This function creates and displays a list of all valid document collections it finds on the local system.

To add a collection to the server's database:

- 1. Click the checkbox next to the collection you want to add.**

Collections that do not have a checkbox next to them are already in the database.

- 2. When you have selected all the collections you want, click Add Selected Collections.**

Note - If the list does not include document collections that are installed on a local mount point, verify that the directory into which the collections were installed has read access set for others.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o scan
```

The command line scanning function adds all the collections it finds; it does not allow you to choose which collections to add.

Note - After you install a collection, you *must* restart the documentation server. To restart the documentation server, click Restart on the AnswerBook2 Administration status page or type the following from the command line:

```
# /usr/lib/ab2/bin/ab2admin -o restart
```

Removing AnswerBook2 Collections

To remove an AnswerBook2 or AnswerBook1 collection from the server's database, select Delete Collection from List from the AnswerBook2 Administration page. To remove the collection:

1. **Select the checkbox next to the titles of the collections you want to remove from the Collection List. (To deselect a selected item, click the checkbox again.)**
2. **After you have selected all the collections you want removed, click on Delete Collection.**

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o del_coll -t collection_title
```

Note - These functions do not remove the collection packages from the system; they only remove the entry for the collection from the server's database. To remove the packages from the system, use the `pkgrm` utility.

Note - After you remove a collection, you *must* restart the documentation server. To restart the documentation server, click Restart on the AnswerBook2 Administration status page or type the following from the command line:

```
# /usr/lib/ab2/bin/ab2admin -o restart
```

Configuring the Documentation Server

To view the current server configuration, select View Current Configuration from the AnswerBook2 Administration page. To change these settings, select Modify Server Configuration from the AnswerBook2 Administration page.

Viewing Documentation Server Configuration

The View Current Configuration page lists the settings shown in Table 3-1 and Table 3-2. These settings are stored in the *server_config_path*/dwhttpd.cfg file (which defaults to /usr/lib/ab2/dweb/data/config/dwhttpd.cfg).

Note - If you are running a CGI-based server rather than the default NSAPI-based server, only some server configuration options are visible in the Administration page's interface. For more information, see "Configuration Issues When Running the Server as a CGI Process" on page 37.

TABLE 3-1 User-Configurable Server Configuration Settings

| Label | Default Value and Description |
|-------------|---|
| Server name | Default: <i>Local host name</i> (for example: imaserver). This is the name clients use to access documents on this server. To improve response time, put in a fully qualified name (for example: imaserver.eng.sun.com). If you expect people outside your domain to access this document server, you must put in the fully qualified name. |
| Server port | Default: 8888. This is the port number for communications. You can choose any unused port number, although the default is recommended. |

TABLE 3-1 User-Configurable Server Configuration Settings *(continued)*

| Label | Default Value and Description |
|---|--|
| Maximum threads | Default: 32. This is the maximum number of concurrent AnswerBook1 searches the server will perform. If you have many AnswerBook1 collections and people search them frequently, you might want to increase this number; however, it might slow your server's response time. |
| Maximum server requests | Default: 1024. This tells the server to perform "housekeeping" activities and restart itself after the specified number of http requests. |
| Access file | Default: /var/log/ab2/logs/access-8888.log. This is the complete path name to the access log that contains information about every access made to the local server. |
| Error file | Default: /var/log/ab2/logs/error-8888.log. This is the complete path name to the error log that contains information about any errors that occurred. |
| Administration access control | Default: On. This tells you whether you control who has access to administrative functions on this server. When you first install a document server, although administrative access control is on, no default username and password are defined. For information on setting up initial administration access, see "Setting Up Initial Administrative Access" on page 26. |
| Automatically start AnswerBook2 server after reboot | Default: yes. This determines whether the AnswerBook2 server software starts automatically when you reboot the system. |

Note - The document administrator should not manually change the settings shown in Table 3-2. The system configures these settings when you install the server software.

TABLE 3-2 Fixed Server Configuration Settings

| Label | Default Value and Description |
|---------------------------------|--|
| Server configuration path | Default: <code>/usr/lib/ab2/dweb/data/config</code> This is the path name to where the configuration files for this server are stored. |
| Server user | Default: <code>daemon</code> This is the owner of the server process. Changing the value of this variable could create significant problems running the server or accessing collections on this server. |
| Plug-in file | Default: <code>/usr/lib/ab2/dweb/data/config/nsapi.cfg</code> This is the complete path name to the file that defines all server plug-ins. |
| Mime file | Default: <code>/usr/lib/ab2/dweb/data/config/mime.types</code> This is the complete path name to the file that defines all MIME information. |
| Doc root | Default: <code>/usr/lib/ab2/data/docs</code> This is the path name to where the document files for this server are stored. |
| Log directory | Default: <code>/var/log/ab2/logs</code> This is the path name to where the log files for this server are stored. |
| AnswerBook1 Collection Database | Default: <code>/var/log/ab2/catalog/ab1_cardcatalog</code> This file identifies the AnswerBook1 collections installed on this server. |
| AnswerBook2 Collection Database | Default: <code>/usr/lib/ab2/dweb/data/config/ab2_collections.template</code> This file identifies the AnswerBook2 collections installed on this server. |

You can also use the following command to view the current server configuration:

```
% /usr/lib/ab2/bin/ab2admin -o view_config [-m server_name] [-p server_port]
```

Changing Documentation Server Configuration

When you install the AnswerBook2 server software, certain variables are set to default values. Use the fields on the Modify Server Configuration page to change these values. You can change the server settings listed in the following table:

TABLE 3-3 Modify Server Configuration

| | |
|-------------------------|--|
| Server name | When you install the documentation server, the AnswerBook2 software automatically sets this variable to the current host name (for example, <code>cats</code>). If you want anyone outside of your domain to access documents on this server, change the name to a fully qualified name (for example, <code>cats.house.pets.com</code>). |
| Server port number | To use a port other than 8888 for the AnswerBook2 server, enter the port number in this field. To use a port number below 1024, you need to perform some additional steps. For more information, see “Using a Port Number Less Than 1024” on page 36. |
| Maximum threads | This is the maximum number of concurrent AnswerBook1 searches the server will perform. If you have many AnswerBook1 collections and people search them frequently, you might want to increase this number; however, this might slow your server’s response time. |
| Maximum server requests | This tells the server how often to perform “housekeeping” activities and restart itself. The number indicates the number of <code>http</code> requests to the server. |
| Access log file | Click the appropriate item to turn on or turn off access logging. If you anticipate many users accessing your documentation server, you might want to periodically save and restart this log file. For more information about rotating the access log file, see “Rotating Log Files” on page 43. |
| Error log file | Click the appropriate item to turn on or turn off error logging. If you experience large numbers of server errors, you might need to periodically save and restart this log file. For more information about rotating the error log file, see “Rotating Log Files” on page 43. |

TABLE 3-3 Modify Server Configuration (continued)

| | |
|--|--|
| Administration access control | Click the appropriate item to turn on or turn off administrative access control. When access control is turned on, only those users who have administrative access defined can perform administrative functions for this server. |
| Automatically start AnswerBook2 server after system reboot | Click the appropriate item to turn on or off this function. |

These functions are also available through the administration command-line interface (ab2admin). For detailed information about the command-line interface, see Appendix A. You can also edit the *server_config_path*/dwhttpd.cfg file (which defaults to /usr/lib/ab2/dweb/data/config/dwhttpd.cfg) to change these values.

Note - If you change any of these values, you must stop and start the documentation server. Log in as root on the server machine and type the following commands:

```
# /usr/lib/ab2/bin/ab2admin -o stop
# /usr/lib/ab2/bin/ab2admin -o start
```

Using a Port Number Less Than 1024

Port numbers below 1024 are reserved for system use. To use one of these numbers (for example, port number 80) for the AnswerBook2 server:

1. **Either use the Modify Configuration Settings function in the AnswerBook2 Administration page or edit the /usr/lib/ab2/dweb/data/config/dwhttpd.cfg file and change the server's port number to 80.**
2. **Edit the /usr/lib/ab2/dweb/data/config/nsapi.cfg file and change the server's port number to 80.**

You should have a line that looks like this:

The following options for the `ab2admin` command will not work:

- `-o access_on`
- `-o access_off`
- `-o error_off`
- `-o error_on`
- `-o modify_server_name`
- `-o modify_server_port`

Working with Other Documentation Servers

When a user clicks on a link in a book, the AnswerBook2 server can follow that link to another AnswerBook2 server. If the book exists on the current documentation server, the link goes there. However, if the book being linked to is not located on the current server, the AnswerBook2 server “falls through” to any alternate documentation servers defined for it to access. You can use this capability to distribute documents across various servers or to create a backup of the documents.

Identifying Alternate Documentation Servers

To see what alternate servers are defined, select View List of Alternate Servers from the AnswerBook2 Administration page. This displays a list of servers currently identified as “fall-through” servers. If a user clicks on a link in a book and that book is not located on the current server, the AnswerBook2 product examines the servers in this list to find the target for the link. The AnswerBook2 server comes with a pre-defined alternate server of `http://docs.sun.com/`, which is the Sun master documentation server and contains released Sun documentation.

For each alternate server defined for the current server, this page shows the name of the server, its port number, and a link to the list of collections installed on that server. When you click show list of collections, you are prompted for a valid administrative ID and password for the alternate server (if administrative access control is defined for the alternate server). In other words, you can add an alternate server without having administrative access to it, but you can only view the list of collections on the alternate server if you have administrative access to it.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o list_server  
[-m server_name] [-p server_port]
```

Adding Alternate Documentation Servers

To enable your current server to access books located on another server (for the purpose of following links between books), select Add Alternate Server from the AnswerBook2 Administration page.

1. **Type the alternate server's name in the AnswerBook2 Server Name field.**
2. **Type the alternate server's AnswerBook2 port number in the Server Port Number field. If you are unsure of the port number, try 8888 (the AnswerBook2 default port number).**
3. **Click Add Server.**

Note - If the alternate server you are trying to add is outside of your company's network, you might not be able to add it. This is often a "firewall" issue.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o add_server -M add_server_name -P add_server_port  
[-m server_name] [-p server_port]
```

Removing Additional Documentation Servers

To remove a server from your server's list of alternate servers, select Delete Alternate Server from the AnswerBook2 Administration page.

1. **Select the server from the Server List.**
2. **Click on Delete Server.**

Note - This removes the server from the list of alternate servers for the local documentation server. It does not stop the removed server from functioning as a documentation server.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o del_server -M del_server_name -P del_server_port  
[-m server_name] [-p server_port]
```

Modifying Alternate Server Order

When you add an alternate server to the list of servers your server can use, the alternate server is added to the bottom of the server order. This order determines the sequence in which your server accesses alternate servers to follow document links. If a user requests a given document from the library and that document is not available from the default server, the server goes through the alternate server list in the defined sequence to find the document.

To change the order of the servers available to your system, select **Modify Server Order** from the **AnswerBook2 Administration** page.

1. **Select a server from the List of Servers.**
2. **Click Move Up in List or Move Down in List.**
3. **Click Move.**

Note - There is no command-line option to perform this function.

Working With Server Reports

The AnswerBook2 server software maintains logs that show server errors and server access. In addition, it provides a summary report of how often document collections are being accessed and how many errors occur.

Book Access Summary Report

To see a summary of access to the books on the server, select **View Book Access Summary** from the **AnswerBook2 Administration** page. The book access report summarizes how often each book on the server has been accessed. For each book on the server, it displays the following:

- **Book title** — The book's title as it appears on the Library page
- **Book short name** — The short name for the book as identified in the book's configuration file

- Collection name — The short name of the collection to which the book belongs, as identified in the `collinfo` file
- Hits — Number of times the book has been accessed
- Errors — Number of errors associated with the book

Access Log Files

To turn on or turn off access logging, select Modify Server Configuration from the AnswerBook2 Administration page.

- To have information about who is accessing information on the documentation server written into the access log file, click the button next to on, then click Apply. The default location for this file is `/var/log/ab2/logs/access-8888.log`.
- To stop having information written into the access log file, click the button next to off, then click Apply.

You can also use the following commands to perform these functions:

```
% /usr/lib/ab2/bin/ab2admin -o access_on [-m server_name] [-p server_port]
```

```
% /usr/lib/ab2/bin/ab2admin -o access_off [-m server_name] [-p server_port]
```

Note - After you change the logging function, you *must* stop and start the documentation server. Log in as `root` on the server machine and type the following commands:

```
# /usr/lib/ab2/bin/ab2admin -o stop
# /usr/lib/ab2/bin/ab2admin -o start
```

Viewing the Access Log

To view the access log file, select View Log Files from the AnswerBook2 Administration page, then click View Access Log File. The access log file is a text file that lists every access made to the documentation server. Each line in the access log looks similar to the following:

```
129.146.83.55 - - [04/Nov/1996:15:07:05 -0800]
''GET /icons/ab2_curr_home.gif HTTP/1.0'' 200 1938
```

Where:

- The first set of numbers is the IP (Internet Protocol) address of the client. For example, 129.146.83.55.
- The information between the square brackets is the date and time of the access. For example, [04/Nov/1996:15:07:05 -0800] .
- The information between the double quotes tells you what access occurred. This typically identifies a URL or file name as well as the protocol used to respond to the access request. For example, ''GET /icons/ab2_curr_home.gif HTTP/1.0'' tells you that the access was to get the file /icons/ab2_curr_home.gif using the HTTP 1.0 protocol.
- The next-to-last number indicates whether the access was successful (200) or not (anything else).
- The last number indicates the size (in Kilobytes) of any information returned to the requestor. For example, 1938 is the size of the .gif file retrieved.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o view_access [-m server_name] [-p server_port]
```

Error Log Files

To turn on or turn off error logging, select **Modify Server Configuration** from the **AnswerBook2 Administration** page.

- To have information about any errors that occur on the documentation server written into the error log file, click the button next to **on**, then click **Apply**. The default location for this file is /var/log/ab2/logs/errors-8888.log.
- To stop having information written into the error log file, click the button next to **off**, then click **Apply**.

You can also use the following commands to perform these functions:

```
% /usr/lib/ab2/bin/ab2admin -o error_on [-m server_name] [-p server_port]
```

```
% /usr/lib/ab2/bin/ab2admin -o error_off [-m server_name] [-p server_port]
```

Note - After you change the logging function, you *must* stop and start the documentation server. Log in as `root` on the server machine and type the following commands:

```
# /usr/lib/ab2/bin/ab2admin -o stop
# /usr/lib/ab2/bin/ab2admin -o start
```

Viewing the Error Log

To view the error log file, select View Log Files from the AnswerBook2 Administration page, then click View Error Log File. The error log file lists every error that occurred on this documentation server. You can use this information to determine the cause of server problems or unusual behaviors. These errors usually identify the server and port with which the error is associated, as well as some text that describes the error.

You can also use the following command to perform this function:

```
% /usr/lib/ab2/bin/ab2admin -o view_error [-m server_name] [-p server_port]
```

Rotating Log Files

You can save the current access or error log to a file and start logging information into an empty file.

- To rotate the error log, select Rotate Error Log File from the AnswerBook2 Administration page.
- To rotate the access log, select Rotate Access Log File from the AnswerBook2 Administration page.

When the Rotate Access (Error) Log File page appears:

1. Type the file name to save to in the Save Log File field.

The default value is `current_date.current_log_file_name.log`, where `current_date` is of the form `YearYearYearYear_MonthMonth_DayDay_HourHour` and `current_log_file_name` defaults to `access-8888.log` or `error-8888.log` (for example, `1997_02_26_14.access-8888.log`).

Note that the Log file location field shows you where the file is saved. You cannot change that information on this page.

2. Click Apply.

Note - After you change the logging function, you *must* stop and start the documentation server. Log in as `root` on the server machine and type the following commands:

```
# /usr/lib/ab2/bin/ab2admin -o stop
# /usr/lib/ab2/bin/ab2admin -o start
```

You can also use the following commands to perform these functions:

```
% /usr/lib/ab2/bin/ab2admin -o rotate_error [-m server_name] [-p server_port]
```

```
% /usr/lib/ab2/bin/ab2admin -o rotate_access [-m server_name] [-p server_port]
```

Common Administration Page Navigation Functions


At the top of every page in the AnswerBook2 product, there is a set of common navigation functions. The following table describes what happens when you select these functions from the Administration pages.

TABLE 3-4 Common Navigation Functions

| Label | Description |
|------------------|---|
| Personal Library | Go to the documentation library catalog. See “Library Page” in <i>Viewing Online Documentation Using the AnswerBook2 System</i> . |
| Contents | This function is not available on Administration pages. |
| Print | This function is not available on Administration pages. |

TABLE 3-4 Common Navigation Functions (continued)

| Label | Description |
|------------------|--|
| Options | Go to the Options page, which contains links to other pages on which you define your Personal Library, set your Language Preference, or administer the documentation server. See "Customizing AnswerBook2 Information" in <i>Viewing Online Documentation Using the AnswerBook2 System</i> . |
| AnswerBook2 Help | View help information. |

On many Administration pages, clicking on the  icon takes you to the main AnswerBook2 Administration page.

Solving AnswerBook2 Problems

This section explains how to solve known problems with the AnswerBook2 product and includes the following information:

- “Server Errors” on page 47
- “AnswerBook2 Error Messages” on page 50

Server Errors

The following table lists problems you might encounter when serving online documentation.

TABLE 4-1 Possible Server Problems

| If you see this... | Try this... | See also... |
|--|---|--|
| <p>Browser proxy error</p> | <p>Edit the <code>/usr/lib/ab2/dweb/data/config/dwhttpd.cfg</code> file and change the host name to <i>hostname.domain</i>.</p> <p>For example, instead of the following line:</p> <pre>set ServerHost imaserver ;#</pre> <p>Use this line:</p> <pre>set ServerHost imaserver.eng.sun.com ;#</pre> <p>Then, restart the documentation server.</p> | <p>If the problem persists, try turning off the proxies on the web browser.</p> |
| <p>Browser errors indicating documentation server is not responding</p> | <p>If the documentation server is not responding, restart it.</p> | <p>For information on stopping and starting the server, see "Starting and Stopping the Documentation Server" on page 24.</p> |
| <p>404 Not Found when trying to access the documentation server</p> | <p>A server process is running; however, the server software has been removed. Reinstall the server software.</p> | <p>For information on installing the software, see "Installing AnswerBook2 Software" on page 10.</p> |
| <p>The Library page displays only the navigation bar and no document collections</p> | <p>Verify that the collections template file (<code>/usr/lib/ab2/dweb/data/config/ab2_collections.template</code>) does not contain any empty or duplicate entries.</p> | <p>If fixing the template file does not correct the problem, you might need to reinstall document collections or server software. For information about installing the software, see "Installing AnswerBook2 Software" on page 10.</p> |
| <p>Red text and the word "BUG" appear in a book (or several books)</p> | <p>The book's source contains markup tags that AnswerBook2 does not recognize and the <code>AB2_DEBUG</code> environment variable is set to "1" on the server.</p> | <p>To turn off the bug display, set the <code>AB2_DEBUG</code> flag to "0," stop the server, and start the server.</p> <p>Contact whoever provided the book to get the markup fixed.</p> |

TABLE 4-1 Possible Server Problems (continued)

| If you see this... | Try this... | See also... |
|--|--|--|
| Unable to access administrative functions on documentation server | The AnswerBook2 documentation server uses access control mechanisms to identify users who can perform administrative functions. The AnswerBook2 administration tools allow the document administrator for the server machine to add and remove administrative users for the server and change their passwords. | To add or remove administrative users for your server, see “Controlling Administrative Access” on page 26. If you need access to another server, contact the document administrator for that server. |
| Cannot perform administrative commands from AnswerBook2 Administration page (browser interface) | Certain functions do not work from the AnswerBook2 Administration page because of permission issues. Try to perform the same function from the <code>ab2admin</code> command-line interface. | For information about the command line options, see the Appendix A. |
| The Scan for Locally Installed Collections function does not list document collections that are installed on a local mount point | Verify that the directory into which the collections were installed has <i>read</i> access set for <i>others</i> . | |
| You added an AnswerBook1 collection, but users do not see it in their libraries | This means something is wrong with the collection’s data in the <code>ab_cardcatalog</code> file. Verify that the information in <code>/var/log/ab2/catalog/ab1_cardcatalog</code> is correct. | |
| You see the message Failed to add collection when trying to add a collection through the AnswerBook2 Administration page | Verify that the path to the collection’s <code>collinfo</code> or <code>ab_cardcatalog</code> file is correct. | |
| Using the <code>restart</code> command to restart the documentation server failed or did not produce the expected results | In some instances, the <code>restart</code> command does not work correctly. Use the <code>stop</code> and <code>start</code> commands instead. | For more information, see “Starting and Stopping the Documentation Server” on page 24. |
| Document collections appear to be corrupted and need to be reinstalled | Use the <code>ab2admin -o del_coll</code> function or Delete Collections from List in the AnswerBook2 Administration page to remove these collections from the documentation server’s database. Then, use <code>pkgrm</code> to remove them from the server before installing the new packages. | |

AnswerBook2 Error Messages

This section lists AnswerBook2 error messages and how to respond to them.

Authentication failed, try again.

What it means: An administrative user mistyped the administrative password.

How to respond: Retype the password. If it fails again, make sure you are trying to administer the server for which this administrator and password are valid.

Cannot find local AnswerBook2 server to administer.

What it means: An attempt to use the `answerbook2_admin` script or launch the AnswerBook2 Administration page from the CDE Front Panel failed because there is no documentation server on this system.

How to respond: Either go to the system where the documentation server is and use the same procedure or type the URL for the documentation server you want to administer in your browser.

Cannot talk to alternate server *server_name*.

What it means: An attempt to contact the specified alternate server failed either because the server's name or port does not exist or because access is blocked to a server outside of your company's network.

How to respond: Verify that the alternate server's name and port are correct. If so, verify that the alternate server is inside of your company's firewall. If the alternate server you are trying to add is outside of your company's firewall, network security might prevent you from adding it as an alternate server.

No AnswerBook2 documentation server was found.

What it means: An attempt to use the `answerbook2` script or launch the client viewer from the CDE Front Panel failed because there is no default documentation server defined.

How to respond: The client viewer uses the following approach to finding a default documentation server:

1. If the `AB2_DEFAULTSERVER` environment variable is defined, the AnswerBook2 viewer launches using the URL defined by that variable. For example, you might have the following line in your `.cshrc` file:

```
setenv AB2_DEFAULTSERVER http://imaserver.eng.sun.com:8888/
```

2. If the machine from which you initiated the AnswerBook2 function is a documentation server, the AnswerBook2 viewer attempts to access the URL:
`http://localhost:8888`
3. If an AnswerBook2 server is registered with FNS (Federated Naming Service), the AnswerBook2 viewer uses the URL of the registered server.

ab2admin(1M) Man Page

add_coll -d *path* [-m *server*] [-p *server_port_number*]

Adds AnswerBook1 or AnswerBook2 collections to the specified AnswerBook2 server database.

add_server -M *alternate_server* -P *alternate_server_port_number*
[-m *server*] [-p *server_port_number*]

Adds an alternate server to the specified server.

auth_off [-m *server*] [-p *server_port_number*]

Disables server administration verification.

auth_on [-m *server*] [-p *server_port_number*]

Enables server administration verification.

autostart_no [-m *server*] [-p *server_port_number*]

Stops AnswerBook2 server from starting automatically when system is (re)booted.

autostart_yes [-m *server*] [-p *server_port_number*]

Causes AnswerBook2 server to start automatically when system is (re)booted.

browser [-m *server*] [-p *server_port_number*]

Launches a web browser for accessing AnswerBook2 Administration pages.

change_password -u *admin_id* [-m *server*] [-p *server_port_number*]

Changes authorized administrator's password.

del_admin -u *user_id* [-m *server*] [-p *server_port_number*]

Deletes a user from the list of authorized server administrators.

del_coll -t *collection_title* [-m *server*] [-p *server_port_number*]

Removes AnswerBook1 or AnswerBook2 collections from the specified server's database.

del_server -M *alternate_server* -P *alternate_server_port_number*
[-m *server*] [-p *server_port_number*]

Deletes alternate server from list of servers known to the specified server.

error_off [-m *server*] [-p *server_port_number*]

Disables the server error log file.

error_on [-m *server*] [-p *server_port_number*]

Enables the server error log file.

help [*command*]

Lists all information about a particular command or all commands.

list [-m *server*] [-p *server_port_number*]

Lists AnswerBook1 and AnswerBook2 collections available on the specified server. The listing includes the books contained within collections.

list_server [-m *server*] [-p *server_port_number*]

Lists all alternate servers defined for the specified server.

menu

Displays a condensed list of command options.

modify_server_name -s *new_server_name* [-m *server*] [-p *server_port_number*]

Modifies the server's name.

modify_server_port -a *new_server_port_number* [-m *server*]
[-p *server_port_number*]

Modifies the server's port number.

restart

Restarts local AnswerBook2 server. Requires root access.

rotate_access [-m *server*] [-p *server_port_number*]

Saves and resets the server access log file.

rotate_error [-m *server*] [-p *server_port_number*]

Saves and resets the server error log file.

scan [-m *server*] [-p *server_port_number*]

Scans for locally installed collections (AnswerBook1 or AnswerBook2) and updates the collections on the specified server's database.

start

Starts local AnswerBook2 server. Requires root access.

start -D

Starts local AnswerBook2 server in debug mode. Requires root access.

stop

Stops local AnswerBook2 server. Requires root access.

view_access [-m *server*] [-p *server_port_number*]

Views the contents of the server access log file.

view_config [-m *server*] [-p *server_port_number*]

Views the configuration settings of the server.

view_error [-m *server*] [-p *server_port_number*]

Views the contents of the server error log file.

USAGE

| | |
|----------------------|-------------------------------|
| quit | Exit interactive mode. |
| q | Exit interactive mode. |
| bye | Exit interactive mode. |
| exit | Exit interactive mode. |
| ? [<i>command</i>] | Get help in interactive mode. |
| h [<i>command</i>] | Get help in interactive mode. |

EXAMPLES**EXAMPLE 1** Listing AnswerBook2 collections available on a server

To list the collections available on a server named `foo.com`, using port number 8888:

```
example% ab2admin -o list -m foo.com -p 8888
```

EXAMPLE 2 Using interactive mode to list collections

To use `ab2admin` in interactive mode for the same operation as shown above:

```
example% ab2admin
>> list -m foo.com -p 8888
```

EXAMPLE 3 Installing an AnswerBook2 collection

To install an AnswerBook2 collection using the `pkgadd` utility:

```
example# pkgadd -d package_directory/ SUNWabsdk
```

The collection directory structure will be copied into the system (by default) to `/opt/answerbooks/`

EXAMPLE 4 Installing an AnswerBook2 collection not updated to server database

To install an AnswerBook2 collection that has been introduced to the system (via `pkgadd`) but did not get updated to the server database:

```
example# ab2admin -o add_coll -d
/opt/answerbooks/english/solaris_2.6/SUNWabsdk
```

(Note: `-d path` must include the `collinfo` file (for an AnswerBook2 collection) or the `ab_cardcatalog` file (for an AnswerBook1 collection).

EXAMPLE 5 Inspecting the definition of an AnswerBook1 collection

To inspect how an AnswerBook1 collection is defined:

```
example% cat /opt/SUNWans/ab_cardcatalog
:id=SUNWab_10_4: \
:version=: \
:title=Solaris XGL 3.1 AnswerBook: \
:tocpath=/net/elirium.Eng/export/answerbook/Solaris_2.4/SUNWaxg/toc: \
```

```
:pspath=/net/elirium.Eng/export/answerbook/Solaris_2.4/SUNWaxg/ps: \
:indexpath=/net/elirium.Eng/export/answerbook/Solaris_2.4/SUNWaxg/inde
```

EXAMPLE 6 Inspecting the definition of an AnswerBook2 collection

To inspect how an AnswerBook2 collection is defined:

```
example% cat/opt/answerbooks/english/solaris_2.6/SUNwabsd/collinfo
dwCollections {
  coll.45.4 dwCollection
}
dwSetParam coll.45.4 {
  location /opt/answerbooks/english/solaris_2.6/SUNwabsdk
  title "Solaris 2.6 Software Developer AnswerBook Vol 1"
  type EbtCollection
}
```

FILES

/var/log/ab2/catalog/local.socat

Catalog file

/var/log/ab2/catalog/remote.socat

Catalog file

/var/log/ab2/catalog/delegate.socat

Catalog file

/var/log/ab2/catalog/libcat.socat

Catalog file

/var/log/ab2/logs/access_8888.log

Default access log file

/var/log/ab2/logs/errors_8888.log

Default error log file

/usr/lib/ab2/dweb/data/config/ab2_collections.template

AnswerBook2 collection database

/var/log/ab2/catalog/ab1_cardcatalog

AnswerBook1 collection database

/usr/lib/ab2/dweb/data/config/admin_passwd

File containing username:password

ATTRIBUTES

See **attributes(5)** for a discussion of the following attributes:

| ATTRIBUTE TYPE | ATTRIBUTE VALUE |
|----------------|-----------------|
| Availability | SUNWab2u |

SEE ALSO

ab2regsvr (1M) Man Page

| | |
|--------------------|--|
| NAME | ab2regsvr - register an AnswerBook2 document server with FNS (Federated Naming Service) |
| SYNOPSIS | <code>/usr/lib/ab2/bin/ab2regsvr [-d] [-h] [-l] [-r] server-url</code> |
| DESCRIPTION | <p>The <code>ab2regsvr</code> command sets up the appropriate name space for the AnswerBook2 document server, depending on which naming service has been selected by the system administrator. The naming service can be <code>NIS</code>, <code>NIS+</code>, or <code>files</code>.</p> <p>To register the server with <code>NIS</code>, it is necessary to be logged in as root on the <code>NIS</code> master server. To register with <code>NIS+</code>, administrative privileges are necessary; one can be on either the <code>NIS+</code> master or <code>NIS+</code> client. To register for <code>files</code>, one must be logged in as root on the machine; this is machine specific and will not be seen on other machines.</p> <p>Registering an AnswerBook2 document server with FNS allows a system administrator to specify the default AnswerBook2 server that users access when they select AnswerBook2 from the CDE desktop or from the OpenWindows root menu. The server's URL does not have to be entered into a web browser.</p> |
| OPTIONS | <p>The following options are supported:</p> <ul style="list-style-type: none"> <code>-d</code> Deletes the AnswerBook2 entry in FNS. <code>-h</code> Displays a usage statement and a brief list of options. <code>-l</code> Lists currently registered AnswerBook2 document servers. <code>-r</code> Replaces the currently defined URL for AnswerBook2 with a new URL. |
| OPERANDS | <p>The following operand is supported:</p> <p><i>server-url</i> Fully-qualified URL for users to access the registered server.</p> |
| EXAMPLES | <p>EXAMPLE 1 Using the <code>ab2regsvr</code> command.</p> <p>To register a server named <code>imaserver</code> located at port 8888:</p> <pre>example# ab2regsvr http://imaserver.eng.sun.com:8888/</pre> |
| ATTRIBUTES | See <code>attributes(5)</code> for descriptions of the following attributes: |

| ATTRIBUTE TYPE | ATTRIBUTE VALUE |
|----------------|-----------------|
| Availability | SUNWab2u |

SEE ALSO `fnlookup(1)`, `attributes(5)`, `fns(5)`



Sample AnswerBook2 Installation

This appendix includes an example of an AnswerBook2 server installation using the `pkgadd` utility.

Sample Installation

The following example shows a complete installation of the AnswerBook2 server software, using the `pkgadd` utility. Note that the postinstall procedure for the `SUNWab2u` package installs the AnswerBook2 Help files for all supported locales, and looks for already-installed document collections and automatically adds them to the server's database.

EXAMPLE C-1 Sample Installation

```
myserver# pkgadd -d .
```

```
The following packages are available:
```

```
1  SUNWab2r      AnswerBook2 Documentation Server
      (sparc) 3.0,REV=1999.0326
2  SUNWab2s      AnswerBook2 Documentation Server
      (sparc) 3.0,REV=1999.0326
3  SUNWab2u      AnswerBook2 Documentation Server
      (sparc) 3.0,REV=1999.0326
```

```
Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]:  all
```

```
Processing package instance <SUNWab2r> from </net/toc/ab2dev/pkgsparc/19990326_v1.4.1_b3>
```

(continued)

```
AnswerBook2 Documentation Server
(sparc) 3.0,REV=1999.0326
Copyright 1999 Sun Microsystems, Inc. All rights reserved.
```

```
DynaWeb, Copyright (c) 1990-1998 Inso Corporation
All Rights Reserved.
```

```
Unpublished-rights reserved under the copyright laws of the United States.
Restricted rights legend: use, duplication, or disclosure by the U.S.
government is subject to restrictions as set forth in subparagraph (c)(1)(ii)
of the Rights in Technical Data and Computer Software clause at
DFARS 52.227-7013 and in similar clauses in the FAR and NASA FAR supplement.
```

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the source is deemed a published work. Dissassembly, decompilation,
or other means of reducing the object code to human readable form is
prohibited by the license agreement under which this code is provided
to the user or company in possession of this copy.
```

```
Using </> as the package base directory.
## Processing package information.
## Processing system information.
   7 package pathnames are already properly installed.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.
```

```
This package contains scripts which will be executed with super-user
permission during the process of installing this package.
```

```
Do you want to continue with the installation of <SUNWab2r> [y,n,?] y
Installing AnswerBook2 Documentation Server as <SUNWab2r>
```

```
## Installing part 1 of 1.
/etc/rc0.d/K41ab2mgr <symbolic link>
/etc/rc1.d/K41ab2mgr <symbolic link>
/etc/rc2.d/S96ab2mgr <symbolic link>
[ verifying class <base> ]
/etc/init.d/ab2mgr
/var/log/ab2/catalog/ab1_cardcatalog
/var/log/ab2/catalog/delegate.socat
/var/log/ab2/catalog/libcat.socat
/var/log/ab2/catalog/local.socat
/var/log/ab2/catalog/remote.socat
/var/log/ab2/logs/access-8888.log
/var/log/ab2/logs/errors-8888.log
[ verifying class <preserve> ]
## Executing postinstall script.
```

```
Installation of <SUNWab2r> was successful.
```

(continued)

```
Processing package instance <SUNWab2s> from </net/toc/ab2dev/pkgsparc/19990326_v1.4.1_b3>
```

```
AnswerBook2 Documentation Server  
(sparc) 3.0,REV=1999.0326  
Copyright 1999 Sun Microsystems, Inc. All rights reserved.
```

```
DynaWeb, Copyright (c) 1990-1998 Inso Corporation  
All Rights Reserved.
```

```
Unpublished-rights reserved under the copyright laws of the United States.  
Restricted rights legend: use, duplication, or disclosure by the U.S.  
government is subject to restrictions as set forth in subparagraph (c)(1)(ii)  
of the Rights in Technical Data and Computer Software clause at  
DFARS 52.227-7013 and in similar clauses in the FAR and NASA FAR supplement.
```

```
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secret, and it is available only under strict license provisions. This  
copyright notice is placed here only to protect Inso in the event  
the source is deemed a published work. Dissassembly, decompilation,  
or other means of reducing the object code to human readable form is  
prohibited by the license agreement under which this code is provided  
to the user or company in possession of this copy.
```

```
Using </usr> as the package base directory.  
## Processing package information.  
## Processing system information.  
    7 package pathnames are already properly installed.  
## Verifying disk space requirements.  
## Checking for conflicts with packages already installed.  
## Checking for setuid/setgid programs.
```

```
This package contains scripts which will be executed with super-user  
permission during the process of installing this package.
```

```
Do you want to continue with the installation of <SUNWab2s> [y,n,?] y
```

```
Installing AnswerBook2 Documentation Server as <SUNWab2s>
```

```
## Installing part 1 of 1.  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_c.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_c.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ca.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ca.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_de.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_de.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_es.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_es.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_fr.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_fr.wv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_it.pv  
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_it.wv
```

(continued)

```

/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ja.pv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ja.wv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ko.pv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_ko.wv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_sv.pv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_sv.wv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_zh.pv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_zh.wv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_zh_tw.pv
/usr/share/lib/sgml/locale/C/styles/solbook/fulltext_zh_tw.wv
/usr/share/lib/sgml/locale/C/styles/solbook/toc.tv
/usr/share/lib/sgml/locale/C/styles/solbook/xml.wv
[ verifying class <base> ]
## Executing postinstall script.

Installation of <SUNWab2s> was successful.

Processing package instance <SUNWab2u> from </net/toc/ab2dev/pkgsparc/19990326_v1.4.1_b3>

AnswerBook2 Documentation Server
(sparc) 3.0,REV=1999.0326
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of the Rights in Technical Data and Computer Software clause at
DFARS 52.227-7013 and in similar clauses in the FAR and NASA FAR supplement.

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the source is deemed a published work. Dissassembly, decompilation,
or other means of reducing the object code to human readable form is
prohibited by the license agreement under which this code is provided
to the user or company in possession of this copy.

Using </usr> as the package base directory.
## Processing package information.
## Processing system information.
   34 package pathnames are already properly installed.
## Verifying package dependencies.
## Verifying disk space requirements.
## Checking for conflicts with packages already installed.
## Checking for setuid/setgid programs.

This package contains scripts which will be executed with super-user
permission during the process of installing this package.

Do you want to continue with the installation of <SUNWab2u> [y,n,?] y

```

(continued)

```

## Installing part 1 of 1.
/usr/lib/ab2/bin/ab2admin
/usr/lib/ab2/bin/ab2bin/admin
/usr/lib/ab2/bin/ab2bin/getepsf <symbolic link>
/usr/lib/ab2/bin/ab2bin/getframe <symbolic link>
/usr/lib/ab2/bin/ab2bin/gettransbitmap
/usr/lib/ab2/bin/ab2bin/nph-dweb
/usr/lib/ab2/bin/ab2cardcat
/usr/lib/ab2/bin/ab2cat1
/usr/lib/ab2/bin/ab2createpl
/usr/lib/ab2/bin/ab2html
/usr/lib/ab2/bin/ab2libcat
/usr/lib/ab2/bin/ab2regsvr
/usr/lib/ab2/bin/ab2search
/usr/lib/ab2/bin/getpage
/usr/lib/ab2/data/docs/Help/C/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_collapse.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_expand.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_graphic.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_lang_prefs.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_lib_prefs.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_minus.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_plus.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_rel3.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/figures/ab2_rel6.gif
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/C/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/C/Help/collinfo
/usr/lib/ab2/data/docs/Help/C/Help/socat
/usr/lib/ab2/data/docs/Help/de/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>

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(continued)

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>
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic
link>
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/de/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/de/Help/collinfo
/usr/lib/ab2/data/docs/Help/de/Help/socat
/usr/lib/ab2/data/docs/Help/es/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/ebt/search.tdr <symbolic
link>
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic
link>
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/es/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/es/Help/collinfo
/usr/lib/ab2/data/docs/Help/es/Help/socat
/usr/lib/ab2/data/docs/Help/fr/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag

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/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/ebt/search.tdr <symbolic
link>
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/fr/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic
link>
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/figures/ab2_rel6.gif
/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/index/index.dat
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/usr/lib/ab2/data/docs/Help/fr/Help/books/ONLINEACCESS/styles.ent
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/usr/lib/ab2/data/docs/Help/fr/Help/socat
/usr/lib/ab2/data/docs/Help/it/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/it/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/it/Help/collinfo
/usr/lib/ab2/data/docs/Help/it/Help/socat
/usr/lib/ab2/data/docs/Help/ja/Help/booklist.txt
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/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag

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/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/ja/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/figures/ab2_ab1_book.gif
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/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/ja/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/ja/Help/collinfo
/usr/lib/ab2/data/docs/Help/ja/Help/socat
/usr/lib/ab2/data/docs/Help/ko/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/ebt/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/ebt/toc.tdr
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/ko/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/ko/Help/collinfo
/usr/lib/ab2/data/docs/Help/ko/Help/socat
/usr/lib/ab2/data/docs/Help/sv/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/ebt/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/ebt/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/ebt/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/ebt/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/ebt/toc.tdr

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/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/eht/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/eht/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/eht/ONLINEACCESS.tag
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/eht/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/eht/toc.tdr
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/figures/ab2_admin.gif
.
.
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/sv/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/sv/Help/collinfo
/usr/lib/ab2/data/docs/Help/sv/Help/socat
/usr/lib/ab2/data/docs/Help/zh/Help/booklist.txt
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/eht/AB2ADMIN.dat
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/eht/AB2ADMIN.edr
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/eht/AB2ADMIN.tag
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/eht/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/eht/toc.tdr
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/figures/ab2_admin.gif
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/figures/ab2_help.gif
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/index/index.dat
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/index/vocab.dat
/usr/lib/ab2/data/docs/Help/zh/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/zh/Help/books/ONLINEACCESS/eht/ONLINEACCESS.dat
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/usr/lib/ab2/data/docs/Help/zh/Help/books/ONLINEACCESS/eht/ONLINEACCESS.tag
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/usr/lib/ab2/data/docs/Help/zh/Help/books/ONLINEACCESS/figures/ab2_admin.gif
.
.
/usr/lib/ab2/data/docs/Help/zh/Help/books/ONLINEACCESS/figures/ab2_rel6.gif
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/usr/lib/ab2/data/docs/Help/zh/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/zh/Help/collinfo
/usr/lib/ab2/data/docs/Help/zh/Help/socat
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/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/AB2ADMIN/eht/AB2ADMIN.edr
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/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/AB2ADMIN/eht/search.tdr <symbolic link>
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/AB2ADMIN/eht/toc.tdr
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/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/AB2ADMIN/figures/ab2_help.gif

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/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/AB2ADMIN/styles.ent
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/eht/ONLINEACCESS.dat
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/eht/ONLINEACCESS.edr
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/eht/ONLINEACCESS.tag
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/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/eht/toc.tdr
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/figures/ab2_admin.gif
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.
.
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/index/index.dat
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/index/vocab.dat
/usr/lib/ab2/data/docs/Help/zh_TW/Help/books/ONLINEACCESS/styles.ent
/usr/lib/ab2/data/docs/Help/zh_TW/Help/collinfo
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/usr/lib/ab2/data/docs/icons/ab2_C_lang.gif
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/usr/lib/ab2/data/docs/icons/ab2_admin_banner.gif
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/usr/lib/ab2/data/docs/icons/ab2_ja_lang.gif

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/usr/lib/ab2/data/docs/icons/ab2_plus.gif
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/usr/lib/ab2/data/docs/icons/ab2_warning.gif
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/usr/lib/ab2/dweb/data/config/C/dtext/awin4.rc
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/usr/lib/ab2/dweb/data/config/C/dtext/edit.rc
/usr/lib/ab2/dweb/data/config/C/dtext/ftwin.rc
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/usr/lib/ab2/dweb/data/config/De_DE/dtext/edit.rc
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/usr/lib/ab2/dweb/data/config/De_DE/dtext/ftwinl.rc

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/usr/lib/ab2/dweb/data/config/De_DE/font.map
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/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/awin2.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/awin3.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/awin4.rc

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/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/awin5.rc
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/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/bwin3.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/edit.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/ftwin.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/ftwin1.rc
/usr/lib/ab2/dweb/data/config/Fr_FR/dtext/hwin.rc
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/usr/lib/ab2/dweb/data/config/Fr_FR/errors.txt
/usr/lib/ab2/dweb/data/config/Fr_FR/font.map
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/usr/lib/ab2/dweb/data/config/It_IT/dtext/edit.rc
/usr/lib/ab2/dweb/data/config/It_IT/dtext/ftwin.rc
/usr/lib/ab2/dweb/data/config/It_IT/dtext/ftwin1.rc
/usr/lib/ab2/dweb/data/config/It_IT/dtext/hwin.rc
/usr/lib/ab2/dweb/data/config/It_IT/dtext/hwin1.rc
/usr/lib/ab2/dweb/data/config/It_IT/dtext/lwin1.rc

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/usr/lib/ab2/dweb/data/config/It_IT/dtext/lwin2.rc
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/usr/lib/ab2/dweb/data/config/It_IT/errors.txt
/usr/lib/ab2/dweb/data/config/It_IT/font.map
/usr/lib/ab2/dweb/data/config/It_IT/msgs.txt
/usr/lib/ab2/dweb/data/config/It_IT/props.txt
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/usr/lib/ab2/dweb/data/config/It_IT/resource/buildmap/strings.dat
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/usr/lib/ab2/dweb/data/config/It_IT/resource/grafx/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/mbl/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/parse/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/parser/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/pub/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/review/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/rvw/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/sit/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/updannot/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/resource/xlc/strings.dat
/usr/lib/ab2/dweb/data/config/It_IT/values.txt
/usr/lib/ab2/dweb/data/config/Ja_JP <symbolic link>
/usr/lib/ab2/dweb/data/config/Locales
/usr/lib/ab2/dweb/data/config/POSIX <symbolic link>
/usr/lib/ab2/dweb/data/config/ab2_admin.template
/usr/lib/ab2/dweb/data/config/ab2_comments.template
/usr/lib/ab2/dweb/data/config/ab2_content.template
/usr/lib/ab2/dweb/data/config/ab2_copyright.template
/usr/lib/ab2/dweb/data/config/ab2_extend.template
/usr/lib/ab2/dweb/data/config/ab2_fpi2soi.template
/usr/lib/ab2/dweb/data/config/ab2_header.template
/usr/lib/ab2/dweb/data/config/ab2_help.template
/usr/lib/ab2/dweb/data/config/ab2_init.template
/usr/lib/ab2/dweb/data/config/ab2_lang.template
/usr/lib/ab2/dweb/data/config/ab2_lang_info.template
/usr/lib/ab2/dweb/data/config/ab2_main.template
/usr/lib/ab2/dweb/data/config/ab2_onevent.template
/usr/lib/ab2/dweb/data/config/ab2_options.template
/usr/lib/ab2/dweb/data/config/ab2_personal_lib.template
/usr/lib/ab2/dweb/data/config/ab2_print.template
/usr/lib/ab2/dweb/data/config/ab2_proc.template
/usr/lib/ab2/dweb/data/config/ab2_scripts.template
/usr/lib/ab2/dweb/data/config/ab2_search.template
/usr/lib/ab2/dweb/data/config/ab2_sys.template

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/usr/lib/ab2/dweb/data/config/ab2_toc.template
/usr/lib/ab2/dweb/data/config/ab2_toolbar.template
/usr/lib/ab2/dweb/data/config/ab2_util.template
/usr/lib/ab2/dweb/data/config/ab2_xml.template
/usr/lib/ab2/dweb/data/config/da <symbolic link>
/usr/lib/ab2/dweb/data/config/de/accent.x
/usr/lib/ab2/dweb/data/config/de/dtext/awin1.rc
/usr/lib/ab2/dweb/data/config/de/dtext/awin2.rc
/usr/lib/ab2/dweb/data/config/de/dtext/awin3.rc
/usr/lib/ab2/dweb/data/config/de/dtext/awin4.rc
/usr/lib/ab2/dweb/data/config/de/dtext/awin5.rc
/usr/lib/ab2/dweb/data/config/de/dtext/bwin.rc
/usr/lib/ab2/dweb/data/config/de/dtext/bwin3.rc
/usr/lib/ab2/dweb/data/config/de/dtext/edit.rc
/usr/lib/ab2/dweb/data/config/de/dtext/ftwin.rc
/usr/lib/ab2/dweb/data/config/de/dtext/ftwin1.rc
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/usr/lib/ab2/dweb/data/config/de/dtext/lwin2.rc
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/usr/lib/ab2/dweb/data/config/de/errors.txt
/usr/lib/ab2/dweb/data/config/de/font.map
/usr/lib/ab2/dweb/data/config/de/msgs.txt
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/usr/lib/ab2/dweb/data/config/de/query.txt
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/usr/lib/ab2/dweb/data/config/de/resource/build/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/buildmap/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/cntxt/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/ctu/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/dtext/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/dwprt/strings.dat
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/usr/lib/ab2/dweb/data/config/de/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/mkcol/strings.dat
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/usr/lib/ab2/dweb/data/config/de/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/updannot/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/de/resource/xlc/strings.dat
/usr/lib/ab2/dweb/data/config/de/values.txt
/usr/lib/ab2/dweb/data/config/de_AT <symbolic link>
/usr/lib/ab2/dweb/data/config/de_CH <symbolic link>
/usr/lib/ab2/dweb/data/config/de_DE <symbolic link>
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/ctu/strings.dat

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/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/dwprt/strings.dat
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/parse/strings.dat
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/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/de_DE.roman8/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/dwhttpd.rc
/usr/lib/ab2/dweb/data/config/dynaweb.rc
/usr/lib/ab2/dweb/data/config/el <symbolic link>
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/usr/lib/ab2/dweb/data/config/es/errors.txt
/usr/lib/ab2/dweb/data/config/es/font.map
/usr/lib/ab2/dweb/data/config/es/msgs.txt
/usr/lib/ab2/dweb/data/config/es/props.txt
/usr/lib/ab2/dweb/data/config/es/query.txt
/usr/lib/ab2/dweb/data/config/es/resource/adirm/strings.dat
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/usr/lib/ab2/dweb/data/config/es/resource/dwprt/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/grafx/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/mb1/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/parse/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/parser/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/pub/strings.dat

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/usr/lib/ab2/dweb/data/config/es/resource/review/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/rvw/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/sit/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/updannot/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/es/resource/xlc/strings.dat
/usr/lib/ab2/dweb/data/config/es/values.txt
/usr/lib/ab2/dweb/data/config/es_AR <symbolic link>
/usr/lib/ab2/dweb/data/config/es_BO <symbolic link>
/usr/lib/ab2/dweb/data/config/es_CL <symbolic link>
/usr/lib/ab2/dweb/data/config/es_CO <symbolic link>
/usr/lib/ab2/dweb/data/config/es_CR <symbolic link>
/usr/lib/ab2/dweb/data/config/es_EC <symbolic link>
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/ctu/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/dwprt/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/parse/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/pub/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/es_ES.roman8/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/es_GT <symbolic link>
/usr/lib/ab2/dweb/data/config/es_MX <symbolic link>
/usr/lib/ab2/dweb/data/config/es_NI <symbolic link>
/usr/lib/ab2/dweb/data/config/es_PA <symbolic link>
/usr/lib/ab2/dweb/data/config/es_PE <symbolic link>
/usr/lib/ab2/dweb/data/config/es_PY <symbolic link>
/usr/lib/ab2/dweb/data/config/es_SV <symbolic link>
/usr/lib/ab2/dweb/data/config/es_UY <symbolic link>
/usr/lib/ab2/dweb/data/config/es_VE <symbolic link>
/usr/lib/ab2/dweb/data/config/fi <symbolic link>
/usr/lib/ab2/dweb/data/config/fr/accent.x
/usr/lib/ab2/dweb/data/config/fr/dtext/awin1.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/awin2.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/awin3.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/awin4.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/awin5.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/bwin.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/bwin3.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/edit.rc
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/usr/lib/ab2/dweb/data/config/fr/dtext/ftwin1.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/hwin.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/hwin1.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/lwin1.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/lwin2.rc
/usr/lib/ab2/dweb/data/config/fr/dtext/rwin.rc
/usr/lib/ab2/dweb/data/config/fr/errors.txt
/usr/lib/ab2/dweb/data/config/fr/font.map
/usr/lib/ab2/dweb/data/config/fr/msgs.txt
/usr/lib/ab2/dweb/data/config/fr/props.txt

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/usr/lib/ab2/dweb/data/config/fr/query.txt
/usr/lib/ab2/dweb/data/config/fr/resource/adirm/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/build/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/buildmap/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/cntxt/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/ctu/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/dtext/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/dwprt/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/grafx/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/mb1/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/parse/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/parser/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/pub/strings.dat
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/usr/lib/ab2/dweb/data/config/fr/resource/rvw/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/sit/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/style/strings.dat
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/usr/lib/ab2/dweb/data/config/fr/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/fr/resource/xlc/strings.dat
/usr/lib/ab2/dweb/data/config/fr/values.txt
/usr/lib/ab2/dweb/data/config/fr_BE <symbolic link>
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/usr/lib/ab2/dweb/data/config/fr_FR <symbolic link>
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/ctu/strings.dat
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/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/mcbi/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/mkb/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/mkcol/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/parse/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/pub/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/style/strings.dat
/usr/lib/ab2/dweb/data/config/fr_FR.roman8/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/glossary/ja/errors.gls
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/usr/lib/ab2/dweb/data/config/glossary/ja/master.gls
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/usr/lib/ab2/dweb/data/config/is <symbolic link>
/usr/lib/ab2/dweb/data/config/iso_8859_1 <symbolic link>
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/usr/lib/ab2/dweb/data/config/it/dtext/awin3.rc
/usr/lib/ab2/dweb/data/config/it/dtext/awin4.rc
/usr/lib/ab2/dweb/data/config/it/dtext/awin5.rc
/usr/lib/ab2/dweb/data/config/it/dtext/bwin.rc

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/usr/lib/ab2/dweb/data/config/it/dtext/bwin3.rc
/usr/lib/ab2/dweb/data/config/it/dtext/edit.rc
/usr/lib/ab2/dweb/data/config/it/dtext/ftwin.rc
/usr/lib/ab2/dweb/data/config/it/dtext/ftwin1.rc
/usr/lib/ab2/dweb/data/config/it/dtext/hwin.rc
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/usr/lib/ab2/dweb/data/config/it/msgs.txt
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/usr/lib/ab2/dweb/data/config/it/query.txt
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/usr/lib/ab2/dweb/data/config/it/resource/vwr/strings.dat
/usr/lib/ab2/dweb/data/config/it/resource/xlc/strings.dat
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/usr/lib/ab2/dweb/data/config/it_IT.roman8/resource/ctu/strings.dat
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/usr/lib/ab2/dweb/data/config/ja.euc/dtext/bwin.rc

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[ verifying class <base> ]
/usr/lib/ab2/dweb/data/config/ab2_collections.template
/usr/lib/ab2/dweb/data/config/admin_passwd
/usr/lib/ab2/dweb/data/ents/map.txt
[ verifying class <preserve> ]
/usr/lib/ab2/dweb/data/config/dwhttpd.cfg
/usr/lib/ab2/dweb/data/config/nsapi.cfg
[ verifying class <config> ]
## Executing postinstall script.
Installing help collections ...

Added : AnswerBook2 Help Collection

Added : Answerbook2-Hilfe-Kollektion

Added : Colección de Ayuda AnswerBook2

Added : Collection d'Aide AnswerBook2

```

(continued)

```
Added : Help
Added : Collezione sulla guida di AnswerBook2

Added : AnswerBook2 Help Collection - Japanese

Added : Hjälpsamling för Answerbook2

Added : AnswerBook2 Help Collection - zh

Added : AnswerBook2 Help Collection - zh_TW

Scanning local collections ...

Added : AnswerBook2 Information Developer's Kit
Added : Solaris 7 System Administrator Collection
Added : Solaris 7 User Collection
Added : Solaris 7 Software Developer Collection
Added : Solaris 7 Reference Manual Collection
Added : Solaris 7 Installation Collection

Document server started as process dwhttpd
Document can be accessed with URL http://myserver:8888

Installation of <SUNWab2u> was successful.

The following packages are available:
 1 SUNWab2r   AnswerBook2 Documentation Server
              (sparc) 3.0,REV=1999.0326
 2 SUNWab2s   AnswerBook2 Documentation Server
              (sparc) 3.0,REV=1999.0326
 3 SUNWab2u   AnswerBook2 Documentation Server
              (sparc) 3.0,REV=1999.0326

Select package(s) you wish to process (or 'all' to process
all packages). (default: all) [?,??,q]: q

myserver#
```

Glossary

This glossary defines how terms are used with respect to the AnswerBook2 product.

| | |
|-------------------------|---|
| alternate server | When a user clicks on a link in a book, the AnswerBook2 product can follow that link to an alternate server. If the book being linked to exists on the current server, the link goes there. If, however, the book is not located on the current server, the AnswerBook2 server “falls through” to any defined alternate servers. |
| AnswerBook | The Sun online documentation product that was provided with pre-2.6 versions of the Solaris operating environment and supplied Display PostScript versions of hardcopy documentation. Throughout this book, the term <i>AnswerBook1</i> is used to differentiate this product from the <i>AnswerBook2</i> product. |
| AnswerBook2 | The Sun online documentation system that uses a web-browser interface and follows a client-server model. The AnswerBook2 product lets you view and print a variety of Sun information, including SGML-based document collections, Display PostScript AnswerBook collections, and man pages. |
| browser | For purposes of AnswerBook2, browser means any HTML 3.2-compliant web-based browser, such as Netscape Navigator™. |
| catalog | When referring to an AnswerBook1 collection, a catalog file is named <code>ab_cardcatalog</code> and a single <code>ab_cardcatalog</code> file contains information about multiple AnswerBook collections (sets of books, often referred to as “AnswerBooks”). When referring to an AnswerBook2 collection, a catalog file is named <code>collinfo</code> and contains information about a specific collection. |
| client | An AnswerBook2 client is any HTML 3.2-compliant browser that connects to an AnswerBook2 documentation server’s URL. |

| | |
|--|---|
| collection, document collection | A document collection is just a logical grouping of books. For example, you might have a collection of Solaris Developer books and another collection of Solaris System Administrator books. |
| documentation server, server | A document server is a machine that serves document files to clients. For this product release, the documentation server must be running the Solaris 2.5.1 operating environment or compatible version. |
| HTML | HyperText Markup Language. HTML is an implementation of SGML that is widely used for authoring information that is accessible through the World Wide Web. |
| library | The AnswerBook2 library is the top level of the document hierarchy. The library can contain multiple collections of AnswerBook1 and AnswerBook2 documents. |
| SGML | Standard Generalized Markup Language. SGML is an international standard for defining document structures. |

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