AirZip® Accelerator for Apache

Release 4.01

Installation and Configuration Manual

AirZip, Inc. reserves the right to make changes to this document and to the product described herein without notice. The software described in this manual is furnished under the terms and conditions of the AirZip License and Software Maintenance and Support Agreements and may be used or copied only in accordance with the terms of the agreement.

For information about your legal rights concerning the use of the AirZip Accelerator for Apache, please refer to the AirZip License agreements.

© Copyright 2002-2007 AirZip Incorporated, All Rights Reserved.

AirZip is a registered trademark and Accelerator is a trademark of AirZip, Inc. Unauthorized use prohibited. Windows and Vista are registered trademarks of Microsoft Corporation in the United States and/or other countries. All other trademarks are property of their respective owners.

Revision 06/07

Contents

AIRZIP® ACCELERATOR FOR APACHE I

RELEASE 4.01 I

INSTALLATION AND CONFIGURATION MANUAL I

INSTALLATION AND CONFIGURATION MANUAL I

1 INTRODUCTION 1

1.1 Server Requirements 1

2 CAPABILITIES 2

2.1 Image Optimization 2

2.2 Dynamic Control of Quality and Performance 2

2.3 Optimization with Standard Browsers (Clientless operation) 3

2.4 Enhanced Optimization with AirZip Internet Explorer Plug-in 3

2.5 Selectable Accelerator Options by image source 3

2.6 Performance Monitoring 3

2.7 Interoperability 3

3 INSTALLING AIRZIP ACCELERATOR 5

3.1 Software Installation on Windows 5

3.2 Enabling the AirZip Accelerator 6

3.3 Software Licensing 9
3.3.1 Licensing Procedures 9
3.3.2 Evaluation, Temporary and Permanent Licenses 9

3.4 Verifying Local Operation 9

3.5 Verifying Operation with web content 11

4 USING BUILT IN PERFORMANCE SELECTION OPTIONS 13

4.1 Using the Integrated AirZip Performance Option Page 13

5 CUSTOMIZING YOUR WEB SITE TO GET THE MOST FROM AIRZIP 15

5.1 Automatically downloading the AirZip Plug-in 15

5.2 Simplifying access to Performance Options Pages 16

5.3 Customizing Performance Options Page 17

5.4 Using Performance Option Links 17

6 CHANGING ACCELERATOR PARAMETERS AND MONITORING ITS PERFORMANCE 18

6.1 Changing the default Performance Option 18

6.2 Changing the default Accelerator Option 18

6.3 Applying specific Accelerator Option to a specific image directory 19

6.4 Monitoring Accelerator Performance 20

7 OPERATION WITH APPLICATIONS SERVERS 22

7.1 Operation with ESRI ArcIMS Server 22

7.2 Operation with BEA WebLogic Server 22

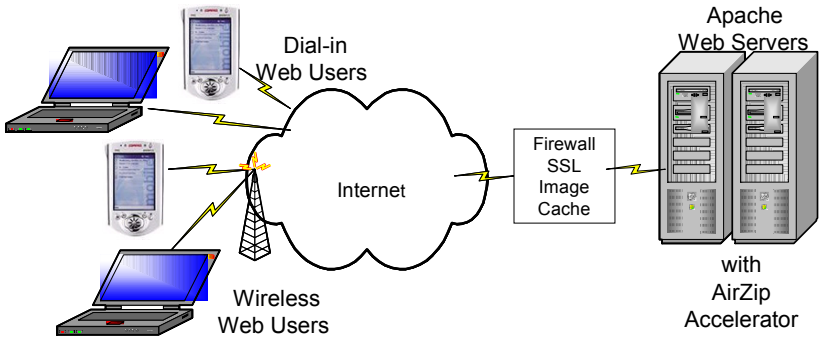
7.3 Operation with Oracle Application Server 23

7.4 Operation with IBM WebSphere Application Server 23

8 CONTACT INFORMATION 24

1 Introduction

AirZip Accelerator for Apache provides high performance, real-time web image optimization, reducing the time to download image content up to 400% over limited bandwidth dialup and wireless connections without the need to modify web content. AirZip Accelerator automatically recognizes the different capabilities of the various browsers and user quality settings to instantly provide the best possible combination of quality and speed.



1.1 Server Requirements

The AirZip Accelerator for Apache is designed to function with Apache HTTP Server 2.0.56 or later on:

- Windows XP, 2000, 2003 and Vista;
- Sun Solaris 10 (SPARC and x86)
- IBM AIX 5.2 or later
- Red Hat Linux RHEL 4 or later
- SuSE Linux SLES 9 or later
- CentOS 4 or later
- HP-UX 11.23 or later (PA-RISC and Itanium)

Note: AirZip Accelerator for Apache may increase CPU usage by between 5% and 10% for typical web pages.

2 Capabilities

The AirZip Accelerator for Apache is an advanced Apache filter plus-in designed to speed the delivery of web pages from web servers to web clients over dialup or wireless connections, primarily through image optimization. Images information constitutes two-thirds of the data that must be downloaded to display typical web pages. When installed on an Apache HTTP Server 2.0.56 or later server, the AirZip Accelerator intercepts incoming http image requests from web clients, retrieves the requested images, and returns an optimized image to the web client. Optimized images are normally much smaller than the originals. They arrive quicker and on AirZip-enabled web clients they render much faster.

2.1 Image Optimization

The AirZip Accelerator incorporates AirZip Image Compression software that leverages AirZip's patented image processing software to produce superior image delivery speed. AirZip Compression provides rapid conversion of GIF, PNG, JPEG, and BMP files to the smallest representation possible at any given quality setting.

AirZip Compression uses several techniques to optimize image size and delivery speed including:

- Converting GIF, PNG, JPEG, and BMP images to AirZip formats where browsers such as Microsoft Internet Explorer are able to present AirZip images.
- Converting GIF, PNG and BMP images to PNG format.
- Reducing the quality of JPEG images for clients.
- Reducing image color content to levels that match specific types of devices
- Presenting animated images as static images (as a selectable option).
- Optimizing image quality based on user quality settings.

AirZip Compression generally results in more vibrantly colored images than other compression techniques.

AirZip image optimization is determined by the capability of the browser requesting the image and the quality of images requested by the user. Image filtering is table driven and can be tailored to a specific quality level and with a specific output file format restriction.

AirZip Compression returns the smallest representation of an image to reduce the download time. If the client is not capable of displaying AirZip's AZV file format, then standard image formats will be returned.

Unless the user settings specify perfect reproduction, image optimization results in image quality reduction. More or less information is removed from the original images depending on the quality selections set by the user.

2.2 Dynamic Control of Quality and Performance

The AirZip Accelerator for Apache allows user control over image quality and delivery performance using standard Internet cookies, which are supported by most browsers. The Web site home page can easily present options for the user to select or change quality/performance setting for their browsing session. The user can also easily access a virtual page for selecting quality settings.

The AirZip Accelerator provides five quality/performance settings:

Pass-through – Images are not optimized to avoid delays when using high-speed connections.
Basic acceleration – Images are optimized for download and rendering speed but match original image quality
More acceleration – Images are optimized for download and rendering speed with an emphasis on nearly matching original image quality.
Still More acceleration – Images are optimized for download and rendering speed and good image quality.
Maximum acceleration – Images are optimized in favor of download and rendering speed over image quality.

If the user selected Maximum acceleration, they would receive the most compressed images so their session would work reasonably fast, especially over narrowband wireless connections. If a user were connecting at Ethernet speeds, they would probably select "no optimization" when there was no need for compression at all, unless the images being transmitted were very large.

2.3 Optimization with Standard Browsers (Clientless operation)

Image optimization is determined by the capability of the browser requesting the image and the quality of images requested by the user. The AirZip Accelerator rapidly converts GIF, PNG, JPEG, and BMP files to deliver image information as much as five times faster to any standard browser. AirZip Accelerator recognizes image requests and quality settings, retrieves the requested image, automatically converts the image to the smallest representation and then sends the optimized image to the user.

2.4 Enhanced Optimization with AirZip Internet Explorer Plug-in

To achieve even greater download performance, Windows Internet Explorer (IE) users can download the AirZip Internet Explorer plug-in a few seconds. When the user has the AirZip Internet Explorer plug-in, the AirZip Accelerator for Apache automatically takes advantage of AirZip's patented compression technology to product the world's best image optimization for a larger portion of web images. With the AirZip IE Plug-in image delivery can be as much as ten times faster for Windows 98 SE, Windows 98, Windows ME, Windows 2000, Windows XP, Windows 2003 and Windows NT users.

2.5 Selectable Accelerator Options by image source

The AirZip Accelerator allows Accelerator Options to be based on the directory in which images are located. With this feature, certain images will always be converted to graphical formats such as PNG or AZV while other images will always remain in their original format – say JPEG.

2.6 Performance Monitoring

The AirZip Accelerator also permits the monitoring of the level of acceleration being gained. A special URL permits the display of total size of the image files processed and the size of the resulting optimized files.

2.7 Interoperability

The AirZip Accelerator for Apache installs in minutes and operates with HTTP and HTTPS sites.

Installation also automatically activates Apache compression of HTML data using GZIP. GZIP dynamically compresses text content to any browser or user-agent that is capable of receiving it.

While not impacting image information, GZIP-based HTTP compression is affective at compressing HTML text data, Java Script and is helpful for optimizing overall page download time.

3 Installing AirZip Accelerator

Installing AirZip Accelerator for Apache requires the following steps:

1. Install the Software
2. Obtaining a license key
3. Verifying Local Operation
4. Verifying Operation with web content

Procedures for each of these steps are provided below along with installation troubleshooting hints.

3.1 Software Installation on Windows

To install AirZip Accelerator for Apache, login as an Administrator for the machine on which the software is to be installed.

Locate the **AirZip Accelerator for Apache on Windows 4.01 Install.exe** install program and follow these steps:

(a) Double-click the file **AirZip Accelerator for Apache on Windows 4.01 Install.exe** to launch the installation program.

(b) When the License Agreement window appears, read the license agreement carefully. If you accept the license, click **Yes** to continue with the installation.

(c) At the next screen, if you are ready to install the program files, click **Next**.

(d) The software is then copied to the "Program Files\AirZip\Apache Accelerator" directory.

The following files will be copied to your system:

File	Location
mod_airzip_filter.so	Program Files\AirZip\Apache\Accelerator\modules
Accelerator.properties	Program Files\AirZip\Apache\Accelerator
.ini AirZip Accelerator Option files	Program Files\AirZip\Apache\Accelerator
httpd.conf sample fragment	Program Files\AirZip\Apache\Accelerator\conf

In addition, the following directories are copied to your system:

"Program Files\AirZip\Apache\Accelerator\optionsPages" contains pages that can be customized and integrated with your web site to allow the user the select the level of optimization.

"Program Files\AirZip\Apache\Accelerator\AirZipSamplePages" contains sample test pages demonstrating the image size and quality at different settings.

(e) The AirZip Accelerator for Apache is as a single shared object (mod_airzip_filter.so). The installer copies this file to the "Program Files\AirZip\Apache Accelerator directory\modules" directory. This file need to be copied to the Apache HTTP Server modules directory (the default location is: "Program Files\Apache Group\Apache2\modules").

Note: The reason these files are not installed directly is that the Apache HTTP Server may be installed in different locations, especially if part of an application server (such as WebSphere, WebLogic, Oracle, etc.)

(f) The optionsPages and AirZipSamplePages directories must be copied in their entirety to the Apache HTTP Server main directory (the default location is: "Program Files\Apache Group\Apache2") directory and included in the httpd.conf file as shown in the example.

3.2 Enabling the AirZip Accelerator

After you have installed the shared object, optionsPages and AirZipSamplePages, you will need to modify the httpd.conf file to configure the AirZip Accelerator for Apache.

Modifying the httpd.conf file directs the Apache web to load the native AirZip Accelerator library as an **Apache module**, and also describes exactly which requests will be handled by the module.

The Apache configuration files will be located in Apache_Home_Directory\conf\httpd.conf (where Apache_Home_Directory is the root directory of the Apache installation. The default location is "Program Files\Apache Group\Apache2\conf\httpd.conf").

To enable the AirZip-Accelerator:

1. Locate and open the httpd.conf file with a suitable text editor.
2. Add the following line for the AirZip Accelerator module in the file httpd.conf:

   LoadModule airzip_filter_module modules/mod_airzip_filter.so
3. Add an Alias for quality options and AirZip test pages. For example,

   Alias /airzip "C:/Program Files/Apache Group/Apache2/optionsPages"

   Alias /samples "C:/Program Files/Apache Group/Apache2/AirZipSamplePages"
4. Set and add AirzipFilter for the content source directory. In the following example, we set and add AirzipFilter for the Apache documentation, AirZip optionsPages and AirZip AirZipSamplePages directories.

Note: Steps 3 and 4 need to be repeated for each directory whose images you wish to optimize.

```
<Directory "C:/Program Files/Apache Group/Apache2/manual">
Options Indexes FollowSymLinks MultiViews IncludesNoExec
SetOutputFilter AirzipFilter
AddOutputFilter Includes;AirzipFilter html
AllowOverride None
Order allow,deny
Allow from all
</Directory>

<Directory "C:/Program Files/Apache Group/Apache2/optionsPages">
Options Indexes FollowSymLinks MultiViews IncludesNoExec
SetOutputFilter AirzipFilter
AddOutputFilter AirzipFilter html
AllowOverride None
Order allow,deny
Allow from all
</Directory>

<Directory "C:/Program Files/Apache Group/Apache2/AirZipSamplePages">
Options Indexes FollowSymLinks MultiViews IncludesNoExec
SetOutputFilter AirzipFilter
AddOutputFilter AirzipFilter html
AllowOverride None
Order allow,deny
Allow from all
</Directory>
```

5. Add the following line for new image type in the file mime.type:

   image/azv azv

The "Program Files\AirZip\Apache Accelerator\conf" directory contains a sample of the modifications needed to the httpd.conf file to enable AirZip Accelerator.

Below is an example httpd.conf file. Lines beginning with # are comments.

```
#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding `LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by `httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
#
LoadModule airzip_filter_module modules/mod_airzip_filter.so
#
#
# This should be changed to the ServerRoot/manual/.  The alias provides
# the manual, even if you choose to move your DocumentRoot.  You may
comment
# this out if you do not care for the documentation.
#
Alias /manual "C:/Program Files/Apache Group/Apache2/manual"
Alias /airzip "C:/Program Files/Apache Group/Apache2/optionsPages"
Alias /samples "C:/Program Files/Apache Group/Apache2/AirZipSamplePages"

#<Directory "C:/Program Files/Apache Group/Apache2/manual">
#    SetOutputFilter DEFLATE
#</Directory>
#
<Directory "C:/Program Files/Apache Group/Apache2/manual">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    SetOutputFilter AirzipFilter
    AddOutputFilter Includes;AirzipFilter html
    AllowOverride None
    Order allow,deny
    Allow from all
</Directory>
#
<Directory "C:/Program Files/Apache Group/Apache2/optionsPages">
    Options Indexes FollowSymLinks MultiViews IncludesNoExec
    SetOutputFilter AirzipFilter
    AddOutputFilter Includes;AirzipFilter html
    AllowOverride None
    Order allow,deny
    Allow from all
</Directory>
#
# AddType allows you to add to or override the MIME configuration
# file mime.types for specific file types.
#
AddType application/x-tar .tgz
AddType image/x-icon .ico
AddType image/azv .azv
```

3.3 Software Licensing

AirZip Accelerator is nodelocked to a specific machine using licensing technology. Before you can run the software, you must first install a license key.

For existing users who are upgrading, AirZip has discontinued the use of the serial number based registration that was used in versions prior to 4.0. As of version 4.0, you will need to obtain a new license key before using the software.

3.3.1 Licensing Procedures

Once you have installed the software, please contact AirZip (email: support@airzip.com) for a license key. To receive a license key, you must send us the following information:

a. Your name;

b. Company name;

c. Company mailing address;

d. Your telephone number;

e. Your email address;

f. Your Proof of Entitlement ID that came with your software (not required for evaluation licenses);

g. The output from the "Program Files\AirZip\Apache Accelerator\hostinfo.exe" command-line utility.

When you receive the license key, you must file transfer it as BINARY to your system, preserving the name. The license file name is "azaccel.key". If you are receiving several license keys, they may be named differently so that you are able to determine which license matches each machine. In this case, each license key must be renamed to "azaccel.key" on its target machine.

The license key must be placed in the "Program Files\AirZip\Apache Accelerator\" directory before you can start AirZip Accelerator.

If your license expires, you will no longer be able to run AirZip Accelerator. Contact AirZip for a new license. As soon as a valid license is installed, AirZip Accelerator will again be fully operational. You do not have to reinstall the software or recreate your settings.

3.3.2 Evaluation, Temporary and Permanent Licenses

- Evaluation Licenses are issued to allow customer to evaluate the product. These licenses allow full use of the product until they expire. They are valid for up to 30 days from date of issue. May be renewed upon special request.
- Temporary Licenses are issued to customers who have purchased the product but have not yet paid for it. Valid for 60 days from date of issue.
- Permanent Licenses do not expire, and are issued once the software has been paid for.

3.4 Verifying Local Operation

To verify proper operation

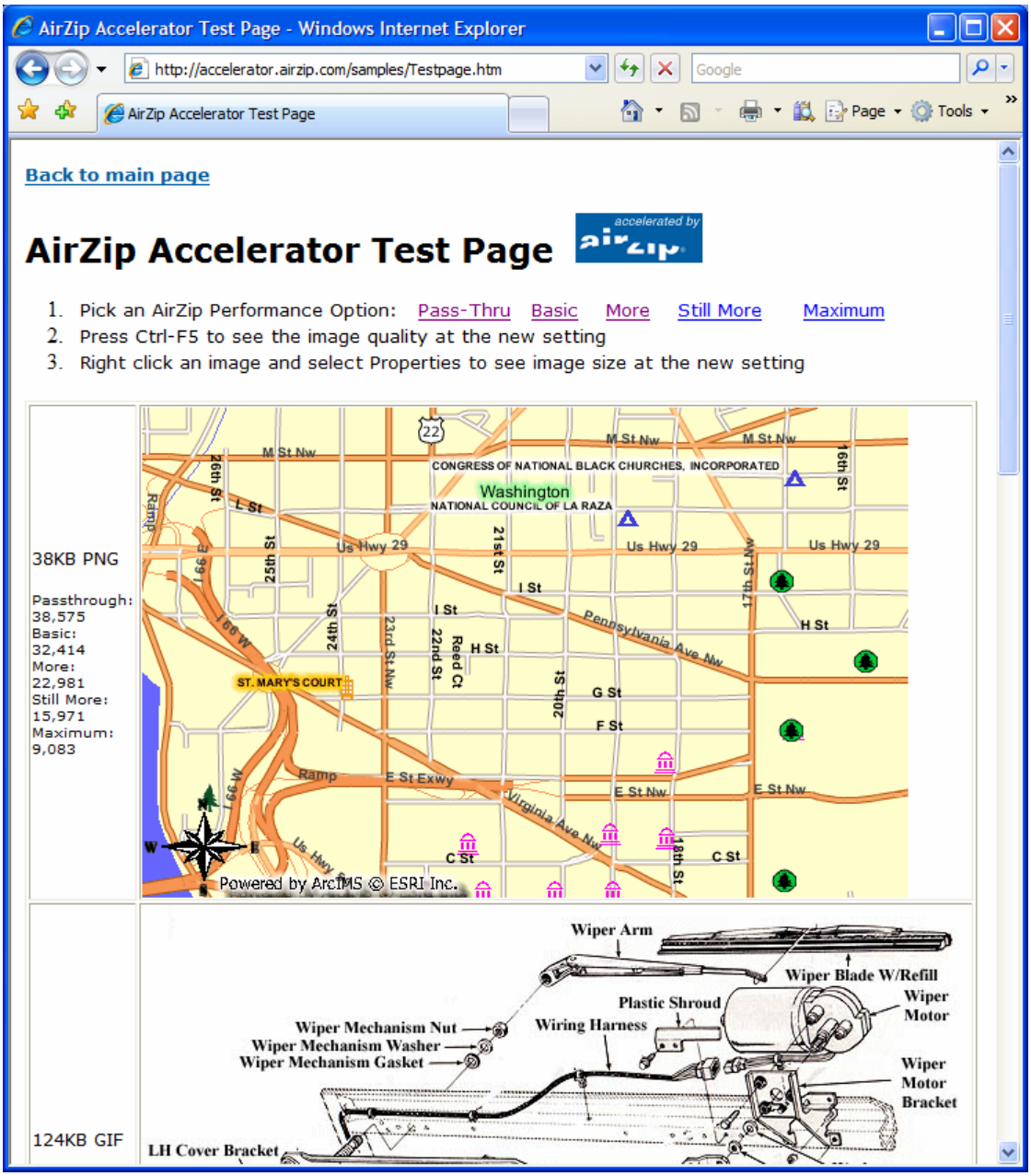
(a) Open Internet Explorer and visit the web page at "http://localhost/samples" and select the AirZip Test Page link (this assume you have added the "samples" alias to you httpd.conf file.

(b) If your server is on the Internet, this page will automatically offer the option of

downloading the AirZip Internet Plug-in.

(c) With or without the AirZip plug-in, select a desired Performance Option and refresh the page using Control F5 to view the test images at the different Performance Levels.

(d) Right click the test images and select properties to view the type of image you are receiving and the size changes from the original (the sizes at various compression levels are also shown in the left hand column next to each image). Test image appearance should change somewhat at each performance level and be smaller at more aggressive performance settings.



3.5 *Verifying Operation with web content*

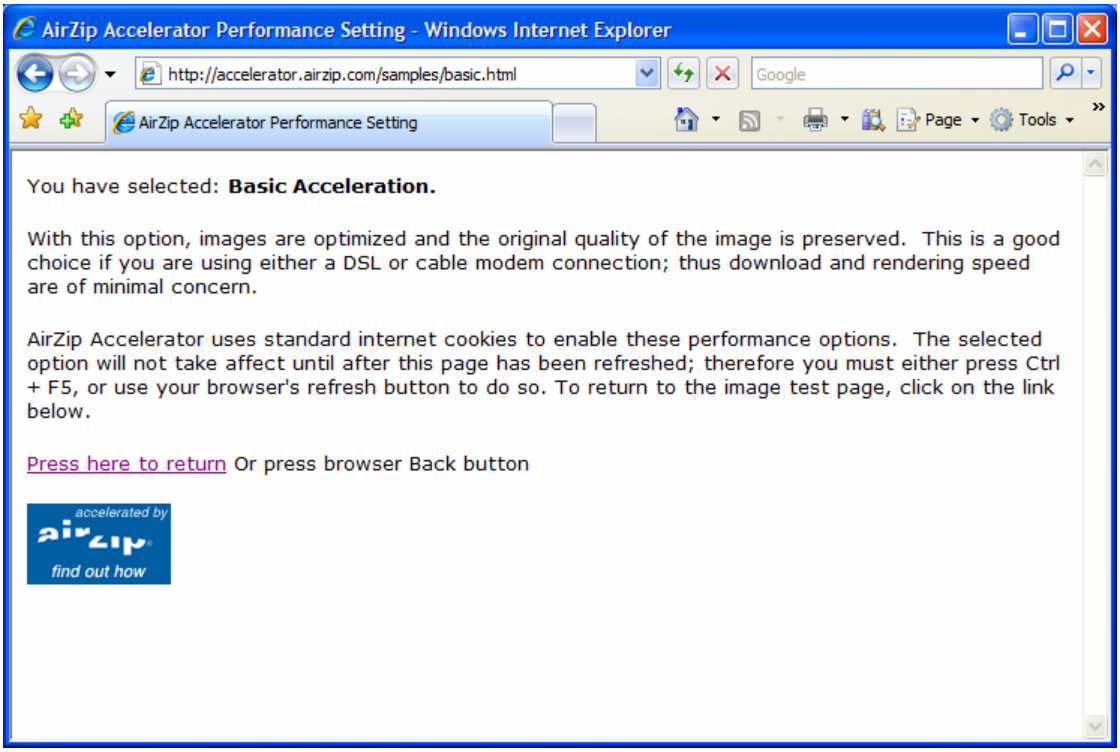
To verify proper operation

(a) Open Internet Explorer visit http://www.airzip.com/Accelerator/browser_plugin/plugin.htm and download the AirZip Plugin for Internet Explorer.

(b) Next visit a web page on the Apache server where the AirZip Acceleration software is installed (i.e. http://

(c) Add "/airzip" at the end of the URL and click **go** to access the AirZip Performance Option page.

(d) Select a different quality setting. A page confirming your selection, an example of which is shown below, will appear. Press your browser back button, or use the return link to return to the previous web page.



(e) Press CTRL+F5 to reload and view the page with the new setting.

Note: The browser reload button reloads the page from cache and will NOT show the pages at the new settings.

(f) Right click on images then select Properties to determine impact on image size and image formats.

(g) Repeat steps (c) thru (f) at different quality settings.

Note: You may customize the performance options pages as required for your installation.

4 Using built in Performance Selection options

AirZip Accelerator for Apache enables users to control image quality and select a performance option by visiting the **Integrated AirZip Performance Option Page**,

4.1 Using the Integrated AirZip Performance Option Page

The AirZip Accelerator for Apache provides web site users five performance options to optimize performance in order to match connection needs as well as user quality preferences:

Pass-thru – Images are not optimized to avoid delays when using high-speed connections. This option is an appropriate choice for users of a high performance internet connection.
Basic acceleration – Images are optimized for download and rendering speed but matching original image quality This option is an appropriate choice for users of DSL or cable modems. (It provides acceleration without altering the appearance of web pages in any way.)
More acceleration – Images are optimized for download and rendering speed with an emphasis on matching original image quality. This option is an appropriate choice for users of quality dial up modems. (It provides acceleration with minor change to some images).
Still more acceleration – Images are optimized for download and rendering speed and image quality. This option is an appropriate choice for users of a medium speed modem (More compression)
Maximum acceleration – Images are optimized in favor of download and rendering speed over image quality. This option is an appropriate choice for users of limited speed wireless modems (It provides the most acceleration.)

Users can change their performance option at any time. When a user selects a particular performance option, a cookie is written to that users computer so that each time the user returns to the web site they experience the same performance option.

Alternatively, the web site can also set appropriate cookies in the user's browser to control the level of optimization.

AirZip Accelerator for Apache provides an integrated **AirZip Performance Option Page** that allows users to change their preference settings at any time.

Users access this web page by appending **"/airzip"** to the URL of the page that they are accessing on the AirZip Accelerator for Apache-enabled web site. For example,

http://www.yoursite.com/airzip

The integrated Performance Option page is shown below:

Once on this page, the user can select a performance option that meets their needs by simply clicking one of the five options listed. When the user makes a selection, AirZip for Apache places a Cookie on the users computer so they automatically return to this setting when they return to this web site.

5 Customizing your Web Site to Get the Most from AirZip

There are a number of ways to provide even more benefits to your website users. They include

1. Automatically download the AirZip Internet Explorer Plug-in to web site
2. Providing an icon on your home page that invites web site users to visit a "Performance Options" page
3. Customizing download and performance options pages tailored for your particular web site.
4. Providing performance Links on key web pages

Procedures for the each are provided here. Sample web pages and related images are automatically installed in the following folders:

"c:\Program Files\AirZip\Apache Accelerator\optionsPages"

"c:\Program Files\AirZip\Apache Accelerator\AirZipSamplePages" (This directory also includes options pages for use with the sample.)

5.1 Automatically downloading the AirZip Plug-in

Your home page can be configured to automatically download the AirZip Internet Explorer Plug-in to Microsoft Windows users of Internet Explorer. This is accomplished by simply serving an AirZip image using a special html OBJECT tag. Below is sample HTML that serves two images to the user. One is an AZV "Experience this site up to 400% faster" image served with an Object tag and the other is the standard non-animated performance option image with a link to the options page. The image served with the Object tag causes the AirZip IE plug-in to be automatically offered to web site users and actually appears only after the plug-in has downloaded and installed. It will not appear if the user accesses the web site using other types of browsers. The link associated with the "Accelerated" image takes the user to the normal Performance pages described above.

In the HTML sample below, the images must be in the /samples/images/ folder on the site that the SRC tag references.):

```
<table border="1" width="43%">
<tr>
<td width="40%">
<object id="AirZipLogo"
codeBase="http://www.airzip.com/download/AzpCtl.CAB#version=2,2,0,0"
type="application/x-Azv" height="136" width="423"
classid="CLSID:E39EB9E7-BF7C-45FE-903F-5AF938F56181">
<param NAME="SRC" VALUE="images/azLogo.azv">
<param NAME="Href" VALUE>
</object>
</td>
<td width="100%">
<a href="/Testpageimages/AcceleratedbyAirZip.azv">
<img height="54" width="96" border="0"
src="images/AcceleratebyAirZip.gif"></a>
</td>
</tr>
</table>
```

A sample home page with this html is installed on your machine at the following location:

http://localhost/samples/SampleHomePage.html

Note: Microsoft recently lost a lawsuit to Eolas Technologies related to the patent "**Distributed hypermedia method for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document**". This affects the automatic display of certain embedded objects, ActiveX controls, etc. As a result, Microsoft has recently updated Internet Explorer to avoid the patent and IE now requires user input to display and activate these objects. Where this is in effect, you will see the message "**Please click to activate and use this control**" when moving the mouse over the control or image. Microsoft has published a paper on a solution to the problem at: http://msdn.microsoft.com/library/?url=/workshop/author/dhtml/overview/activating_activex.asp

The AirZip sample pages that load the AirZip IE Plugin have been updated based on this method. You should refer to the html source for the SampleHomePage.html, plugin.html and TestPage.htm pages as well as the Javascript file, AirZipPlugin.js file all located in the AirZipSamplePages directory when implementing the AirZip Accelerator in your web site.

5.2 Simplifying access to Performance Options Pages

AirZip recommends the inclusion of an icon on your home page that invites web site users to visit a "Performance Options" page that allows them to select options appropriate to their connections.

AirZip provides two custom icons for this purpose:

Animated Version

Non Animated version

5.3 Customizing Performance Options Page

The performance options page described in the previous section can be customized to for your particular environment.

5.4 Using Performance Option Links

Performance options can be added to any page by simply adding links in the following form:

Pass-thru

Basic

More

Still More

 Maximum

The performance option is set when the user selects the link but does not have an effect unless the user refreshes the current page with Control-F5 with Internet Explorer or surfs to a different page.

This can be as simple as adding the following types of links to key web pages:

Change your AirZip Settings Pass-thru Basic More Still More Maximum

Note again: Whenever the user selects a new performance option, a page confirming the selection will be displayed. The user must press the browser Back button to return to the page from which the change was made.

6 Changing Accelerator parameters and monitoring its performance

6.1 Changing the default Performance Option

The AirZip Accelerator installs with a default setting of D for Client Preference and **More** for Image Quality Preference. **Please see Section 4 for descriptions for these Performance options.** In special circumstances – for example, where a specific web server is serving only wireless users – default setting can be changed by manipulating property settings following these steps:

1. Go to "Program Files\AirZip\Apache Accelerator" directory.
2. Locate the file Accelerator.properties (an example of which is shown below in **Section 6.3**)
3. Edit the default properties under different keys. **For example,** you can change default quality from 1 to 2 under the key DEFAULT_QUALITY. For the **Performance Codes**, see the following table.
4. Restart the Apache server.

Performance Codes Table (there five choices for Image Quality):

0	Basic acceleration – Images are optimized for download and rendering speed but matching original image quality This option is an appropriate choice for users of DSL or cable modems. (It provides acceleration without altering the appearance of web pages in any way.)
1	More acceleration – Images are optimized for download and rendering speed with an emphasis on matching original image quality. This option is an appropriate choice for users of quality dial up modems. (It provides acceleration with minor change to some images).
2	Still more acceleration – Images are optimized for download and rendering speed and image quality. This option is an appropriate choice for users of a medium speed modem (More compression)
3	Maximum acceleration – Images are optimized in favor of download and rendering speed over image quality. This option is an appropriate choice for users of limited speed wireless modems (It provides the most acceleration.)
X	Pass-thru – Images are not optimized to avoid delays when using high-speed connections. This option is an appropriate choice for users of a high performance internet connection.

6.2 Changing the default Accelerator Option

The AirZip Accelerator Option is a set of parameters that determine how the AirZip Accelerator processes different images at different quality settings. These parameters are contained in an .ini file. When the AirZip Accelerator is installed the default Accelerator Option is General.ini.

To alter the default Accelerator Option, modify the ***Accelerator.properties*** file ("Program Files\AirZip\Apache Accelerator") under the key "FORMAT_TABLE_NAMES" and move the desired option .ini (or table) to the first position. For example, in the following line "FORMAT_TABLE_NAMES=GIFPNGJPGtoAZV.ini;General.ini;GIFPNGJPGtoPNG.ini;GIFPNGToPng.ini;PassJPGThru.ini;Passthru.ini;" the desired Option is GIFPNGJPGtoAZV.ini..

The following Accelerator Option files are provided with the AirZip Accelerator:

General.ini	Recommended Accelerator Option. Works well with a large variety of images.
GIFPNGJPGtoAZV.ini	Converts all images to AirZip's AZV images at the same Performance Option settings as General.ini.
GIFPNGJPGtoPNG.ini	Converts all images to PNG images at the same Performance Option settings as General.ini
GIFPNGtoPNG.ini	Converts all images to GIF and PNG to PNG images at the same Performance Option settings as General.ini
Passthru.ini	Applies not image processing whatever at any quality setting. Useful where only select images will be accelerated using custom Accelerator Options for specific Directory. See following sections.
PassJPEGThru.ini	Same as General.ini except JPEG images are not optimized at any Performance Option setting.

6.3 Applying specific Accelerator Option to a specific image directory

To override the default Accelerator Option and apply a different Option only to a specify type of image, follow these steps:

1) Append the Directory where those images are located to the Accelerator Option to be applied under the key "PAIR_OF_TABLE_DIR" in file Accelerator.properties. **For example, "**PAIR_OF_TABLE_DIR=GIFPNGJPGtoPNG.ini;C:/Program Files/Apache Group/Apache2/optionsPages/Testpageimages;" means that all images in that directory will be changed to PNG format. See example below.

   Note: For Windows you must use forward slash "/" instead of back slash.

2) Restart Apache HTTP Server (Changes will not take affect until Apache is restarted).

Example "Accelerator.properties" file.

```
#Accelerator properties
#
# You can redefine the following default values
#
# All possible values for QUALITY:
#   Pass-thru: X
#   Basic: 0;
#   More: 1;
#   Still More: 2;
#   Maximum: 3.
DEFAULT_QUALITY=1
#
# All possible values for DO_ANIMATION:
#   Use animation: 0
#   Use first frame in AZV: 1
```

```
DEFAULT_DO_ANIMATION=1

#
# All possible values for DO_DENOISE:
#   Do not do denoise: 0
#   Do denoise: 1
DEFAULT_DO_DENOISE=0
#
# All possible values for DO_TRANSPARENT:
#   No no conversion: 0
#   Convert to azv replace transparency to a color: 1
#   Convert to azv, leave the transparency: 2
DEFAULT_DO_TRANSPARENT=2
#
# All possible values for AZV_SUPPORT_TYPE:
#   Not support AZV: 0
DEFAULT_AZV_SUPPORT_TYPE=0
#
# All possible values for MAX_COLOR_OUTPUT:
#   non-negative numbers, i.e., >=0
# Note: if this value is zero, all output image keep original quality
DEFAULT_MAX_COLOR_OUTPUT=256
#
# All possible values for initInfo:
#   Print out init info (start with AirzipFilter) in the file error.log: 1
#   Not print out init info in the file error.log: 0
initInfo=0
#
# put all .ini files (tables) in one line and use ";" to seperate them.
# Append ";" for the last .ini file (table). For example,
# FORMAT_TABLE_NAMES=General.ini;GIFPNGJPGtoAZV.ini;
# Note: the first .ini table is the defaut table.
FORMAT_TABLE_NAMES=General.ini;GIFPNGJPGtoAZV.ini;GIFPNGJPGtoPNG.ini;
#
# Append all directories to the table which you want the output format.
# Use ";" to seperate them,
# even for the last directory. For example,
# PAIR_OF_TABLE_DIR=GIFPNGJPGtoPNG.ini;C:/Program Files/Apache
Group/Apache2/htdocs/images;
# Note: must use forward slash "/"
#
PAIR_OF_TABLE_DIR=General.ini;
PAIR_OF_TABLE_DIR=GIFPNGJPGtoAZV.ini;
PAIR_OF_TABLE_DIR=GIFPNGJPGtoPNG.ini;C:/Program Files/Apache
Group/Apache2/optionsPages/Testpageimages;
PAIR_OF_TABLE_DIR=GIFPNGToPng.ini;
PAIR_OF_TABLE_DIR=PassJPGThru.ini;
PAIR_OF_TABLE_DIR=Passthru.ini;
```

6.4 Monitoring Accelerator Performance

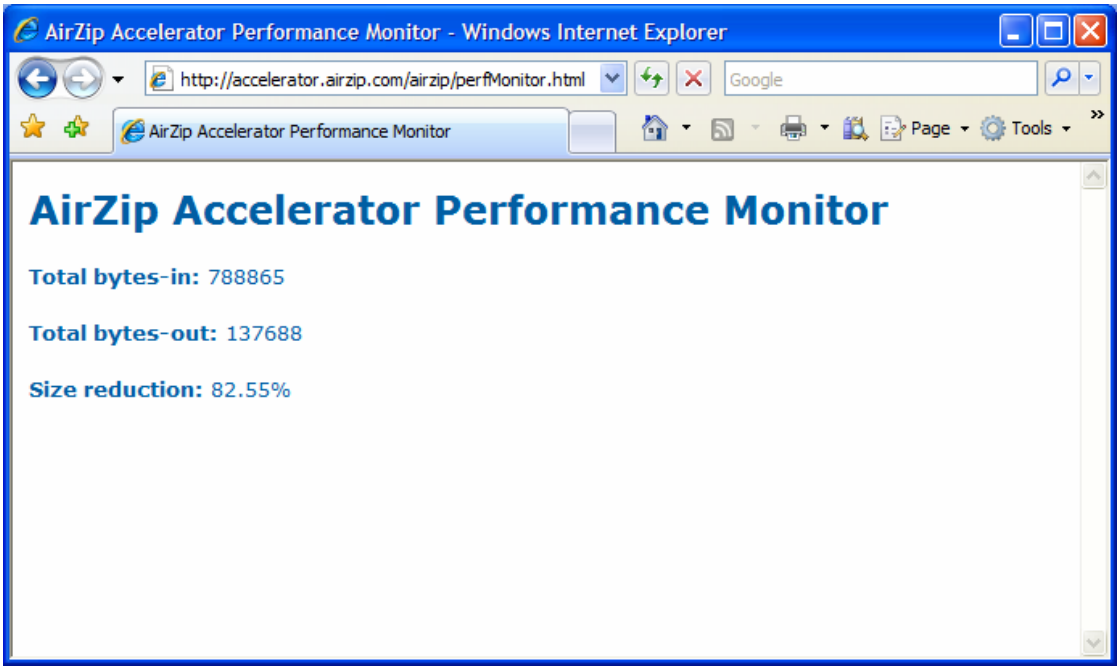
The AirZip Accelerator for Apache automatically gathers statistics regarding its compression results. These can be viewed using the URL: http://<yoursite>/airzip/perfMonitor.html.

The performance statistics are based on the amount of data processed since the last time Apache was restarted or the performance monitor reset.

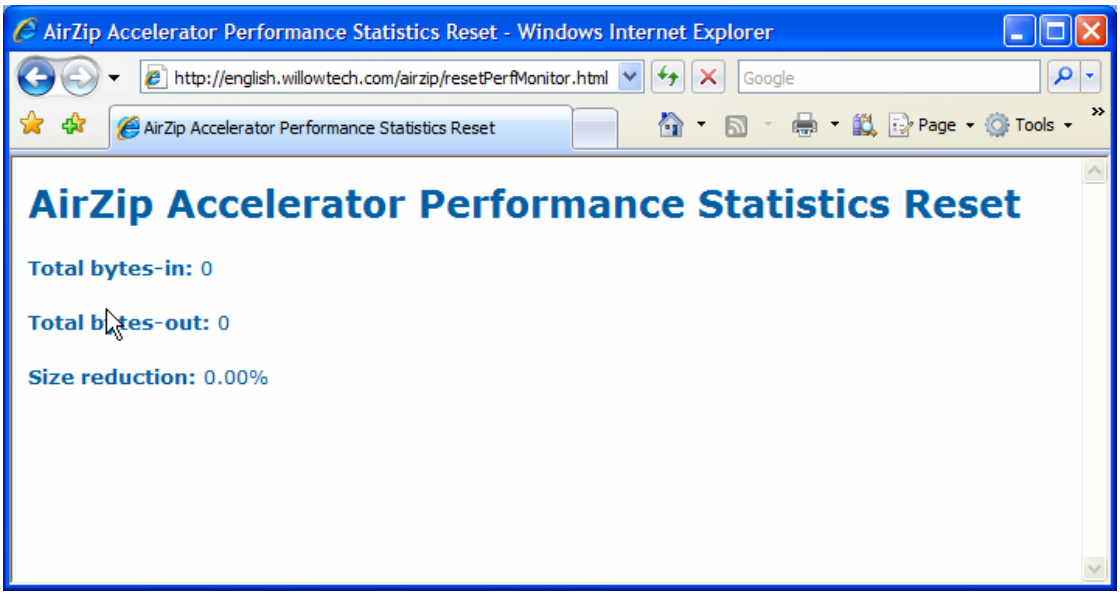
Note: Images that are not processed by the AirZip Accelerator (including those sent under the

Pass-through mode do not count toward the total. The statistics only represent the reductions in transmitted bytes for this images actually processed through the acceleration trancoder.

An example of the performance monitor output is shown below.



A special URL, http://<yoursite/airzip/resetPerfMonitor.html is available to reset the statistics at any time:



7 Operation with Applications Servers

7.1 Operation with ESRI ArcIMS Server

The ESRI ArcIMS Server is a leading platform for distributing geographic information systems (GIS) and mapping services via the Internet. ArcIMS software allows users to integrate local data sources with Internet data sources for display, query, and analysis in an easy-to-use Web browser.

The AirZip Accelerator may be installed on an operating ESRI ArcIMS Server or installed prior to installing ArcIMS Server software.

Configuration recommendations:

(a) For best performance as well as map quality, ArcIMS should be configured to generate graphical (computer-created) map images in PNG format rather than JPEG.

(b) Photographic images such as satellite images should be encoded in JPEG format.

(c) If possible, make sure that important data is depicted in colors that are far apart in the spectrum from other colors. This helps on sites that allow user control of image quality.

(d) If possible, use solid colors to depict distinct map areas or features instead of texturing or dithering. Texturing will increase map size more than the use of solid colors.

If the predominant map images on an ArcIMS installation are graphical in nature and in JPEG format, AirZip Accelerator can be configured to automatically optimize such maps and improve their quality. This requires switching the General.ini file to one optimized for this purpose (refer to section 6.3).

7.2 Operation with BEA WebLogic Server

WebLogic Server is a leading application server for developing and deploying multi-tier distributed enterprise applications. The AirZip Accelerator can be used with BEA WebLogic in both a single server and cluster configurations.

Follow the steps in the “BEA WebLogic Installing and Configuring the Apache HTTP Server Plug-In” to install and configure the WebLogic Apache plugin. This document can be found on

http://edocs.bea.com

The locations as of this writing are:

WebLogic Server 7.0: http://edocs.bea.com/wls/docs70/plugins/apache.html

WebLogic Server 8.1: http://edocs.bea.com/wls/docs81/plugins/apache.html

WebLogic Server 9.0: http://e-docs.bea.com/wls/docs90/plugins/apache.html

WebLogic Server 9.1: http://e-docs.bea.com/wls/docs91/plugins/apache.html

WebLogic Server 9.2: http://e-docs.bea.com/wls/docs92/plugins/apache.html

WebLogic Server 10.0: http://e-docs.bea.com/wls/docs100/plugins/apache.html

Once the configuration is complete, restart Apache HTTP Server.

To verify the combined operation of the AirZip Accelerator with BEA WebLogic follow these steps

1. On the Windows server use **Start -> Programs -> BEA Weblogic Platform <ver> ->**

Weblogic Server <ver>-> Server Tour and Examples -> Launch Pet Store to launch the PetStore example (where **<ver>** is the installed version of WebLogic).

2. Wait for WebLogic to initialize the PetStore application and present the application in a browser window. This can take a minute or two. The browser window will appear and show the following web page:

   http://Server:7001/petstore/index.jsp

3. Change the URL to http://Server/petstore/index.jsp/airzip by removing the port number "7001", and adding /airzip.

4. Click go and the AirZip Performance Option page should allow you to modify the AirZip performance options.

7.3 Operation with Oracle Application Server

Oracle Application Server is a leading J2EE application server providing built-in portal software, wireless and voice, Web page caching, and business intelligence features.

When used with the AirZip Accelerator for Apache, the resulting configuration can be thought of as a three-tiered architecture. The Apache HTTP Server is the front tier, the Oracle PL/SQL Gateway (a Oracle9i AS component) is the middle tier, and Oracle Database is the backend tier.

Follow the Oracle procedures for installing the Oracle 9i or 10g Application Server. For example, the following are the steps used to install the Oracle9i Database (Enterprise Edition, v9.0.1.1.1), Oracle9i Application Server (Standard Edition v1.0.2.2.2) and Portal (v3.0.9.8.2):

3) Install the Oracle9i Database (Enterprise Edition, v9.0.1.1.1) by using "Oracle9i Database Installation Guide, Release 1 (9.0.1.1.1) for Windows, Part Number A90162-01."

4) Install the Oracle9i Application Server (Standard Edition v1.0.2.2.2) by using "Oracle9i Application Server Installation Guide, Release 1 (v1.0.2.2.2) for Windows NT/2000, Part Number A95822-01."

5) Configure the Oracle Plug-in for Apache by using "Oracle HTTP Server Administrator's Guide".

7.4 Operation with IBM WebSphere Application Server

IBM WebSphere® Application Server is a leading Java™ technology-based Web application server, integrating enterprise data and transactions with the e-business world. It provides a rich, e-business application deployment environment with a complete set of application services including capabilities for transaction management, security, clustering, performance, availability, connectivity and scalability.

Procedures for installing Version 5.1.x with Apache HTTP Server can be found on IBM's web site at:

http://publib.boulder.ibm.com/infocenter/wasinfo/v5r1//topic/com.ibm.websphere.base.doc/info/aes/ae/tins_manualWebApache20.html

Procedures for installing Version 5.1.x with IBM HTTP Server can be found on IBM's web site at:

http://publib.boulder.ibm.com/infocenter/wasinfo/v5r1//topic/com.ibm.websphere.base.doc/info/aes/ae/tins_manualWebIHS20.html

There are no further steps required for its use with the AirZip Accelerator for Apache.

8 Contact Information

To report problems and/or provide feedback, please contact AirZip.

Additional help resources or updates may be available by emailing support@airzip.com

Last page of document