



PowerChute Shutdown Utility for Apache Web Server

Product Overview

Purpose

American Power Conversion (APC) has developed the APC PowerChute Shutdown Utility for Apache Web Server to configure the automatic shutdown of Apache HTTP Server software running on a UNIX operating system. Shutdown is invoked by PowerChute® *plus* when it detects a given condition in the attached APC uninterruptible power supply (UPS).

Versions Supported

The Shutdown Utility for Apache Web Server supports Apache HTTP Server releases 1.2.x and 1.3.x running on Sun® Solaris™ SPARCStations and IBM® AIX systems.

Apache HTTP Server Software

An Apache Web server—the common name for a server running Apache HTTP Server software—manages Web sites by storing Web pages which are then sent out in response to HTTP requests from remote browsers. Apache Web servers often work in conjunction with e-commerce packages and database software to manage large volumes of customer transactions.

Apache Web Servers and Power Failure

In the event of a sudden loss of power, an Apache Web server without UPS protection does not complete the steps it would normally take in order to close all open Web transactions and shut down. When the Apache Web server is not correctly shut down, log files may be incomplete, incorrect, or corrupted. Thus administrators can lose critical transaction data (data upload or download transactions, etc.) when the Apache Web server is stopped abnormally.

A protected Apache Web server that lacks automatic shutdown capability requires the presence of the Web administrator. In the event of a power failure, the administrator must quickly send a complex “kill” command to the server in order to shut down the software before the UPS stops supplying power.

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Product Overview, *continued*

APC Solution to Apache Web Server Shutdown

The Shutdown Utility for Apache Web Server provides a solution to the problem of abnormal shutdown of an Apache Web server. The utility automates the process of creating the proper command script to be invoked by PowerChute *plus* in the event of a power failure.

While the APC UPS is providing battery power to your Apache Web server during a power failure, PowerChute *plus* (via FlexEvents) initiates the command script which prevents new connections, finishes processing current transactions, shuts down the software gracefully, and logs all transactions.

Features of the Utility

With the Shutdown Utility for Apache Web Server you can:

- Easily configure PowerChute *plus* to shut down your Apache Web server automatically during a power failure.
 - Keep a log of all unattended shutdowns.
 - Specify the location of the shutdown script.
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Using the Shutdown Utility for Apache Web Server

Overview

Setting up your Apache Web server to use the shutdown utility will require you to perform several procedures:

1. **Downloading the Utility** to your system, if you have not already done so.
 2. **Running the Utility** to configure your Web server for shutdown.
 3. **Setting Up PowerChute plus** to run the shutdown script created in Procedure 2.
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Downloading the Utility

To download the utility to your system:

1. Go to **Application Shutdown Utilities** from the **Free Software Upgrades** page on the APC Web site.
2. Select the link entitled **apacheshut.tar**.
3. Create or select a download directory and filename for the file. If you give the download file a different name, you must ensure that the new name has the same **tar** extension. Select **OK**. The brief download will begin.
4. Go to the download directory. From the command line, type:

```
tar -xvf filename
```

where *filename* is the name of the file you downloaded in Step 3. Press ENTER. The command will extract 4 files:

- a. **apacheshut**—the Shutdown Utility for Apache Web Server.
 - b. **apacheshut.pdf**—this user guide in portable document format (PDF).
 - c. **README**—a text file with basic information on the contents of the download.
 - d. **language.txt**—a file for use only by the shutdown utility.
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Using the Shutdown Utility for Apache Web Server, *continued*

Required Privileges

To use the utility, you must have one of the following privileges:

- root
- root equivalent
- write to file system

If necessary, change your privileges to match one of the three privileges listed above. For information on how to change privileges, refer to the instructions available for your UNIX system.

Required Information

When you run the utility, you will be asked for two pieces of information:

- Location of the Apache Web Server configuration files
- Location for the shutdown script that will be created by this utility.

You will be able to use the default path or enter a path of your choosing.

Running the Utility

To run the Shutdown Utility for Apache Web Server:

1. From the command line in the download directory, type:

```
./apacheshut
```

and press ENTER. The opening screen of the utility appears.

2. Answer the questions as prompted by the utility. See **Required Information** above.
 3. The closing screen will show the path and filename of the shutdown script that has just been created by the Shutdown Utility for Apache Web Server. You will use this path and filename when setting up PowerChute *plus* to implement the shutdown script. The filename will be **apacheshutscript**.
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Using the Shutdown Utility for Apache Web Server, *continued*

Setting Up PowerChute *plus*

Next you must configure PowerChute *plus* to invoke the shutdown script created by the shutdown utility. For a full description of how to set up PowerChute *plus* to execute command files, see “FlexEvents” in the PowerChute *plus User’s Guide*. Complete the following procedure to set up PowerChute *plus* FlexEvents for Apache Web server shutdown.

1. Start PowerChute *plus*. Connect to the UPS.
2. From the PowerChute *plus* **Configuration** menu, select **Event Actions**. In the Event Action dialog box, select the event that will invoke the shutdown script you just created.

Note: You can set up more than one event to trigger a shutdown of the Apache Web server. If one event triggers a shutdown of the Apache Web server, subsequent shutdown commands (triggered by other events) have no effect on the Apache Web server.

3. Select **Run Command File** and select **Options** next to it. In the Run Command File dialog box, enter the path and filename of the shutdown script in the Command File line. If the line already contains a filename, follow the procedure in [Multiple Shutdown Commands](#) before proceeding with Step 4.
4. Do not change **Wait __ Seconds Before Executing** unless you have specific reasons to do so. For further information, see the PowerChute *plus User’s Guide*.
5. Select **OK**. PowerChute *plus* is now configured to shut down your Apache Web server automatically when the chosen condition occurs.
6. Repeat Steps 2–5 for each event to be configured.

Note: If you start shutdown from FlexEvents, PowerChute *plus* is committed to that type of shutdown. Any subsequent event that invokes a shutdown for the server will not override a shutdown in progress.

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Using the Shutdown Utility for Apache Web Server, *continued*

Testing Operation

To test the shutdown script:

1. Simulate a power failure or other event that you expect to trigger the shutdown of your Apache Web server.
2. Wait for the Apache Web server to shut down.
3. Check for successful shutdown by using a text editor to open the Apache Web server error log. (The default for Apache HTTP Server software is `/var/log/error_log`.)
4. When the shutdown has been successful, the following messages appear at the end of the error log:

```
Apache Web Server Automated Shutdown
Starting:

Apache Web Server Automated Shutdown
Successful.
```

If these messages (above) do not appear in the error log, see [Troubleshooting on page 7](#).

Note: If you have set up more than one event to use the shutdown script, certain power events could trigger more than one of these events. When the shutdown script has been run more than once, the error log will show multiple entries of successful shutdown.

Multiple Shutdown Commands

Each event action in FlexEvents can run only one command file. If the Run Command File dialog box already contains the name of an existing file, perform the following steps.

1. Do not change the current path name in the text box.
2. Using a text editor, open the command file listed in the Command File dialog box.
3. Append the contents of the Apache Web server shutdown script at the end of the file.

Note: Placing the contents of the shutdown script after existing commands will ensure that any existing commands are not delayed during an automated shutdown.

4. Save the file.
 5. Proceed with Step 4 of the procedure in [Setting Up PowerChute plus on page 5](#).
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After Installation

Reusing the Utility Files

After you have successfully configured PowerChute *plus* to run **apacheshut-script** during a utility power failure, you will not normally need the shutdown utility files. However, you may want to save these files for future use.

Warning



Do **not** edit the shutdown script. If you make changes to the location of Apache Web server configuration files or of the shutdown script, you must run the Shutdown Utility for Apache Web Server again to provide the updated locations. If you change the name or location of the shutdown script:

- Reconfigure PowerChute *plus* to run the new script.
 - Delete the old shutdown script.
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Troubleshooting

If you have trouble with the Shutdown Utility for Apache Web Server, refer to the following table.

Table 1: Troubleshooting		
Problem	Possible Cause	Solution
An error message appears while you are running the utility.	The language file does not exist in the same directory as apacheshut .	Find the language file—by re-downloading and uncompressing, if necessary—and move it to the same directory as apacheshut .
	You do not have one of the privileges required for writing the shutdown script.	Change one of the privileges as described by the error message.
When you test the script, the Apache Web server does not shut down and no shutdown entry appears at the end of the error log.	The location you gave for the Apache Web server configuration files is not correct for the installation of Apache HTTP Server software that is running.	Run the utility again and provide the correct location of the Apache Web server configuration files.

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After Installation, *continued*

Troubleshooting, continued

Table 1: Troubleshooting		
Problem	Possible Cause	Solution
The shutdown script runs successfully when tested in PowerChute <i>plus</i> , but does not run during an actual power outage.	The delay (Wait __ Seconds Before Executing) is set too long, and the UPS turns off its output before the delay expires.	Shorten the delay in the Run Command File dialog box or associate the script file with a different event, one that is triggered sooner in the PowerChute <i>plus</i> shutdown sequence.
	The operating system shut down before the Apache Web server had time to complete shutdown.	Lengthen the Shutdown Server Delay in PowerChute <i>plus</i> .
During a shutdown sequence (testing or automatic), the Apache Web server does not shut down. The error log records the starting of the shutdown process, but has no message about successful shutdown and no failure message.	The shutdown script was executed, but failed to complete. The server has stopped responding.	There is a problem with the Apache Web server configuration. Consider reconfiguring or reinstalling the Apache Web server software.
	The OS shut down before the Apache Web server had time to complete shutdown.	Lengthen the Shutdown Server Delay in PowerChute <i>plus</i> .
During a shutdown sequence (testing or automatic), the Apache Web server does not shut down. The error log records the starting of the shutdown process and a failure message.	The location you gave for the Apache Web server configuration files is not correct for the installation of Apache HTTP Server software that is running.	Run the utility again and provide the correct location of the Apache Web server configuration files.
	The kill command did not complete successfully because PowerChute <i>plus</i> does not have the required privileges.	Change the privileges for the PowerChute <i>plus</i> service to include root or root-equivalent rights. Retest.

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After Installation, *continued*

Troubleshooting, continued

Table 1: Troubleshooting		
Problem	Possible Cause	Solution
After automated shutdown, the error log contains the message: “[notice] httpd: caught SIGTERM, shutting down.”	This message, generated by the Web server, indicates normal operation. Neither Apache HTTP Server nor the APC shutdown utility has encountered an error or problem.	N/A

Contacting APC

The following table shows how to contact APC by phone or online.

Table 2: Contacting APC	
USA & Canada	1-800-800-4272
Mexico	95 800 804 4283
Brazil	0800-127221
Worldwide	1-401-789-5735
Web site	http://www.apcc.com
Online technical support	http://support.apcc.com
