

EasyRestore™ 4.0



Software Development Kit

PowerQuest[®] EasyRestore[™] 4.0

Software Development Kit

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Appendix B: End User License Agreement

Introduction

This introduction includes the following sections:

- What is EasyRestore?
- EasyRestore Licensing
- EasyRestore System Requirements

What is EasyRestore?

PowerQuest EasyRestore is a complete system recovery tool that allows any computer user to quickly and easily recover the original system setup in the event of an operating system crash or non-physical hard-disk failure. Combined with Drive Image Pro, EasyRestore enables OEMs, VARs, service providers and IT technicians to create a compressed image file containing the operating systems and applications that are pre-installed on a computer. EasyRestore then allows an IT technician to place the image file on a CD-ROM or other removable media such as a Jaz or Zip drive. This image file serves as a quick and easy system recovery solution in the event of a system crash or hard-disk failure.

EasyRestore allows all levels of PC users to restore their computers to its original manufactured condition without costly technical intervention. This system recovery solution is ideal for businesses that do not have a certified technician or for portable computers that need to be restored in the event of a system crash or hard-disk failure.

EasyRestore Licensing

You have purchased a license that allows you to distribute a set amount of EasyRestore system recovery CDs. Be aware that each CD containing a hard disk image created using EasyRestore represents one use of the software. You are authorized to create the maximum number of system recovery CDs for which you have purchased a license (25, 50, 100, and so forth). Refer to your license agreement and certificate for details. To order additional EasyRestore licenses, contact PowerQuest at 800-379-2566 or visit the PowerQuest web site at www.powerquest.com.

EasyRestore System Requirements

Hardware/Software	Minimum
Processor	Intel 386SX (486 or later recommended)
RAM	8 MB; 16 MB required for FAT32 or NTFS (32 MB recommended)
3.5-inch diskette drive	3.5-inch diskette drive recommended
CD-ROM drive	Any speed
Hard drive free space	5 MB
Operating System	Windows 95, 98, Me, NT, 2000, DOS 5.0, OS/2
Monitor	VGA (SVGA recommended)
Pointing Device	Mouse recommended

IMPORTANT! To avoid operating system conflicts, use similar machines to restore images created with EasyRestore. This program is not intended to restore images for different hardware configurations or to clone multiple workstations. EasyRestore is intended for disaster recovery only.

Mode of Operation

This chapter includes the following sections:

- Running EasyRestore in Default Mode
- Password-Protected Image Files
- Command Line Switches
- Standard End User Restore Process
- Script File Examples

EasyRestore specifically serves as a one-step system recovery solution. Anytime an end user wants to restore his or her system to the factory defaults, the end user boots the computer from the floppy or the EasyRestore CD and clicks **Continue**.



Running EasyRestore in Default Mode

After the user clicks **Continue**, a warning displays to tell the user that EasyRestore will destroy any data on the hard disk and restore the operating systems and applications originally installed on the computer. The user then clicks **Yes** to confirm the restoration of the system to its original setup.

If the user clicks **No**, the EasyRestore program exits. If the user clicks **Yes**, the EasyRestore default mode deletes the entire hard drive, including all the user's data, and restores the computer to its original system setup.

To set up an EasyRestore system recovery CD that bypasses the default mode, you can use command line switches. Refer to "Command Line Switches" on page 5 for additional information about customizing an EasyRestore system recovery CD.

Password-Protected Image Files

If the image file was password-protected when created in Drive Image Pro, the user is prompted for a password before the restore process begins.



IMPORTANT! If you choose to password-protect the image file, you must provide the password to your users or specify it with the `/PWD` command line switch before they can access the system recovery CD.

Command Line Switches

To set up a system recovery CD that does not delete everything on the user's hard drive during the restore process, you can use various switches that will selectively restore partitions on the hard drive without destroying data in other partitions on the drive.

To use these switches, type `PQER /switch`, where `/switch` is one or more of the following:

Command Line	Description
<code>/CAS</code>	Copies all sectors within the selected partitions.
<code>/CBS</code>	Enables bad sector checking.
<code>/CEC</code>	Checks for an extra cylinder. This corrects a problem of the BIOS and DOS reporting different maximum cylinder numbers.
<code>/CMD=<filename></code>	Specifies script command file. The script file contains arguments that are passed to the program. The default script (<code>/cmd=restore_all</code>) deletes all of the data on drive 1 except for the first sector (unless the <code>/WFS</code> switch is specified). All of the partitions in the image file copy to drive 1, then resize proportionally.

Command Line	Description
/DBG=<filename>	Enables debug messages and directs them to a file. For example, <code>PQER /dbg=debug.txt</code> directs messages to the <code>debug.txt</code> file.
/DSK=<number>	Specifies disk number for macro commands. The <code>/CMD</code> switch must be set to <code>/CMD=RESTORE_ALL</code> , or the <code>/DSK</code> switch will not work.
/ERR=<filename>	Designates an error file.
/I24	Ignores the “partition past 1024 cylinder” error.
/IFC	Ignores file system checks. Using this switch allows a partition with a known file system error (for example, cross-linked files) to be stored in an image. Likewise, that same partition can be restored if this switch is used and if the partition does not need to be resized during the restore process.
/IMG=<filename>	Designates an image file.
/IUI=<number>	Overrides the time in between billboard image updates on the progress screen. The time needs to be specified in seconds. If not specified, the updates occur every minute.
/LOG=<filename>	Designates a log file. Must be used in conjunction with <code>/CMD</code> . It cannot be used alone.
/NBS	Disables bad sector checking. By default, bad sector checking is disabled.
/NRB	No reboot after program exit.
/NUI	No user interaction; bypasses the Continue/Cancel main window and the warning dialog.
/NWD	No warning dialog.
/PWD=<string>	Unlocks a password-protected image file. The password may be a number or a string of letters, numbers, and characters.
/RAV	Causes each sector written to disk during the restore process to be read back and compared with the data just written as an extra security precaution. Using this parameter significantly increases restore time.

Command Line	Description
/SCO	Syntax Check Only parameter; this switch causes the syntax of each command in the script file to be checked without executing the command. You must also run EasyRestore with the /LOG command, so you can view the results of the /SCO command.
/WFS	Wipe First Sector parameter; deletes the master boot record once all partitions are deleted with the script command DELETE ALL; only accessible using scripting.

Command Line Example

To specify SCRIPT.TXT as the script file, ERROR.TXT as the error file, and E:\IMAGES\DRIVE2.PQI as the image file, type the following:

```
PQER /CMD=SCRIPT.TXT /ERR=ERROR.TXT /IMG=E:\IMAGES\DRIVE2.PQI
```

Standard End User Restore Process

Whether you set up a boot floppy and CD or only a bootable CD, these are the standard steps in the restore process:

1 Insert CD in drive (and boot floppy if necessary).

2 Boot the computer.

3 The text version of the license agreement appears.

Press any key to scroll through the license agreement.

The EasyRestore splash screen appears followed by the main screen. EasyRestore will begin the restore process immediately if the /NUI switch is set.

4 Click **Continue** to continue the restoration process.

A warning message appears indicating that the entire hard disk will be deleted during the restore process.

The warning dialog will not display if the /NWD switch is set.

5 Click **Yes** to continue the restoration process.

If a password has been set for the image file, the **Password** dialog appears.

6 Type the password, and press <Enter>.

The **Restore Process** dialog appears, and the restore process begins.

- 7 After the process is complete, the user is prompted to reboot the computer.

If the /NRB switch has been set, EasyRestore exits back to DOS without displaying a reboot screen.

Script Files

The script file designated in the command line contains arguments or instructions that are passed to the program, determining which operations are executed.

Because the scripts execute without user intervention, use extra care when developing the script file. For example, if the DELETE ALL command is encountered, all the partitions on the currently selected drive will be deleted without any warning or confirmation messages which would normally allow the user to cancel the operation.

Script Argument	Action
SELECT DRIVE {<number>}	Selects the drive of the number specified. For example, SELECT DRIVE 1 selects the first hard drive in the system. After this command, all other commands refer to drive 1 until another SELECT DRIVE command is given.
SELECT PARTITION <number>	Selects the specified partition by number on the currently selected drive. Partitions are numbered in the order of their starting sector number on the disk, excluding any extended partitions or free spaces.
SELECT PARTITION <driveletter>	Selects the partition assigned the specified drive letter by DOS. Since DOS only assigns drive letters to visible FAT partitions, only these types of partitions can be selected using this command.

Script Argument	Action
SELECT PARTITION <volumelabel>	Selects the first partition with the specified volume label. For example, SELECT PARTITION "DATA" selects the first partition labeled "DATA." If more than one partition has this label (including FAT32, NTFS, and HPFS partitions), only the first one is selected.
SELECT PARTITION FIRST	Selects the first partition.
SELECT PARTITION NEXT	Selects the partition immediately following the last selected partition regardless of the syntax used to select that partition.
SELECT PARTITION ALL	Selects all the partitions on the currently selected drive.
SELECT FREESPACE {first last next largest}	Selects the specified free space on the currently selected drive. When selecting the largest free space, it does not matter whether the free space is inside or outside of the extended partition.
SELECT IMAGE {<number> all}	Selects the specified image in the image file. For example, SELECT IMAGE 3 or SELECT IMAGE ALL.
PROTECT PARTITION FIRST	Protects the first partition from being deleted.
PROTECT PARTITION LAST	Protects the last partition from being deleted.
PROTECT PARTITION DIAGNOSTIC	Protects the first valid partition of an unknown type from being deleted. (The diagnostic partition must be either the first or last partition on the disk.)
DELETE	Deletes the last partition selected using any of the SELECT PARTITION commands.
DELETE ALL	Deletes all partitions on the currently selected drive without having to select them.

Script Argument	Action
DELETE EXTENDED	Deletes the extended partition; the extended partition can only be deleted after all the logical drives within it have been deleted.
SECTOR CHECK ON	Enables Bad Sector Checking for all restore operations following the command. An alternative to /CBS if you need Bad Sector Checking off for some partitions and on for others.
SECTOR CHECK OFF	Disables Bad Sector Checking for all restore operations following the command. An alternative to /NBS if you need Bad Sector Checking on for some partitions and off for others.
SET ACTIVE	Sets the last partition selected as the active partition (meaning it will be the boot partition).
RESIZE IMAGE NO	Causes the last selected image to not be resized when the RESTORE command is encountered.
RESIZE IMAGE PROPORTIONAL	Proportionally resizes the last selected image when the RESTORE command is encountered.
RESIZE IMAGE <number>	Resizes the last selected image to the specified number (in MB) when the RESTORE command is encountered.
RESIZE IMAGE MAX	Resizes the last selected image to the maximum size possible. If this is used in a situation where the partition can take up the rest of the drive, it will fill up the drive.

Script Argument	Action
RESIZE IMAGE MOST SPACE	Resizes the partition with the most free space. 1) Ignores “Resize Image Proportional” and treats it as “Resize Image No.” 2) Ignores “Resize Image Max” and treats it as “Resize Image No” and 3) Considers “Resize Image <value> as valid, causing the partition to be excluded from consideration when calculating the MOST SPACE.
RESTORE	Downloads all selected images into the free space and resizes them according to the RESIZE commands, if any.
REBOOT	Reboots the computer; any commands following this command will not be executed.

Script File Examples

EasyRestore’s default mode of operation deletes all the data on the user’s hard drive and then restores the original system setup from the EasyRestore system recovery CD. The following scenarios are useful for resellers or corporations that want to bypass the default mode and not delete partitions two, three, and so forth.

Scenario 1: Protect Diagnostic Partition

EasyRestore system recovery CD restores the original system setup but does not delete the diagnostic partition.

Command Line

```
PQER /CMD=SCRIPT.TXT /IMG=Drive1.PQI
```

Script

```
SELECT DRIVE 1
PROTECT PARTITION DIAGNOSTIC
DELETE ALL
SELECT FREESPACE FIRST
```

```
SELECT IMAGE ALL
RESIZE IMAGE PROPORTIONAL
RESTORE
SELECT PARTITION 1
SET ACTIVE
```

Scenario 2: Delete and Restore First Partition Only

EasyRestore system recovery CD deletes and restores the first partition without destroying other partitions on the drive. This scenario is useful for systems that are set up with multiple partitions. In most cases, the first partition contains the original system setup (that is, the operating system and applications that were pre-installed on the computer). The second partition and succeeding partitions generally contain the user's data and applications added after the user received the computer.

This scenario ensures that partitions two, three, and so on will not be destroyed when the user uses the EasyRestore system recovery software.

Command Line

```
PQER /CMD=SCRIPT.TXT /IMG=PARTITION1.PQI
```

Script

```
SELECT DRIVE 1
SELECT PARTITION 1
DELETE
SELECT DRIVE 1
SELECT FREESPACE FIRST
SELECT IMAGE ALL
RESIZE IMAGE PROPORTIONAL
RESTORE
SELECT PARTITION 1
SET ACTIVE
```

Creating a Recovery CD

This chapter includes the following sections:

- Overview
- Creating Recovery Media

Overview

There are two steps to creating a disaster recovery CD.

- 1 Create an image file using Drive Image or Drive Image Pro.

Refer to your Drive Image documentation for details about creating an image file.

- 2 Create the recovery media.

Creating Recovery Media

There are two configurations that an end user may need for recovery media:

- **Bootable Floppy Disk with No CD-ROM Support**—The disk will boot the user's computer into DOS mode.
- **Bootable Floppy Disk with CD-ROM Support**—The disk will boot the user's computer into DOS mode and assign a drive letter to the CD-ROM.

The options are discussed in the sections that follow.

Bootable Floppy Disk with No CD-ROM Support

- 1** To format a floppy disk and copy the necessary boot files onto it, insert a blank floppy in drive A, type `MKDISK`, then press `<Enter>`.
- 2** From a command prompt in the DOS directory of the PowerQuest EasyRestore CD, type `FORMAT A: /V:EZRestore /U`, then press `<Enter>` to copy the system files to the newly created floppy disk.
- 3** From the DOS folder on the PowerQuest EasyRestore CD, copy the following files to the floppy disk.
 - `IBMBIO.COM`
 - `IBMDOS.COM`
 - `COMMAND.COM`
 - `HIMEM.SYS`
- 4** From the `RESTORE` folder on the PowerQuest EasyRestore CD, copy the following files to the floppy disk.
 - `MOUSE.COM`
 - `LICENSE.TXT`
 - `PQER.EXE`
 - `PQER.RTC`
 - `*.PCX` (all PCX files)
- 5** Create an `AUTOEXEC.BAT` file that contains the following information.

```
[AUTOEXEC.BAT]
@ECHO OFF
PROMPT $P$G
REM Insert command to Run Easy Restore, for example, PQER
/CMD=SCRIPT.TXT /IMG=PQER.PQI
```

- 6** Create a `CONFIG.SYS` file that contains the following information.

```
[CONFIG.SYS]
LASTDRIVE=Z
DEVICE=HIMEM.SYS
```

Bootable Floppy Disk with CD-ROM Support

- 1** To format a floppy disk and copy the necessary boot files onto it, insert a blank floppy in drive A, type MKDISK, then press <Enter>.
- 2** From a command prompt in the DOS directory of the PowerQuest EasyRestore CD, type `FORMAT A: /V:EZRestore /U`, then press <Enter> to copy the system files to the newly created floppy disk.
- 3** Copy your CD-ROM driver to the newly created floppy disk, and edit the CONFIG.SYS file by changing the line that reads “YourCDRom.SYS.” Replace “YourCDRom” with the name of your CD-ROM driver.
- 4** From the DOS folder on the PowerQuest EasyRestore CD, copy the following files to the floppy disk.
 - IBMBIO.COM
 - IBMDOS.COM
 - COMMAND.COM
 - HIMEM.SYS
 - CDEX.EXE
- 5** From the RESTORE folder on the PowerQuest EasyRestore CD, copy the following files to the floppy disk.
 - MOUSE.COM
 - LICENSE.TXT
 - PQER.EXE
 - PQER.RTC
 - *.PCX (all PCX files)
- 6** Create an AUTOEXEC.BAT file that contains the following information.

```
[AUTOEXEC.BAT]
```

```
@ECHO OFF
```

```
PROMPT $P$G
```

```
CDEX.EXE /D:PQCDROM /L:Z
```

```
REM Insert command to run Easy Restore, for example, PQER  
/CMD=SCRIPT.TXT /IMG=PQER.PQI
```


Customizing the Interface and Creating Billboards

This chapter includes the following sections:

- Adding a Graphic to the EasyRestore Interface
- Creating Marketing Billboards

Adding a Graphic to the EasyRestore Interface

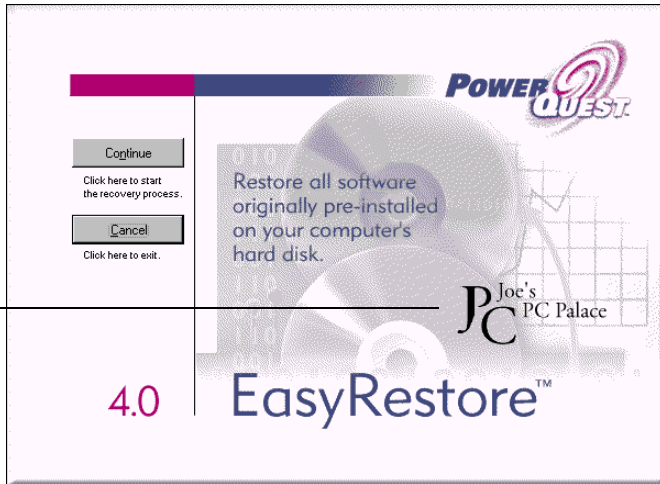
EasyRestore provides some options that enable you to promote your business directly in the EasyRestore system recovery software. You can insert a customized graphic in the EasyRestore main interface. The graphic can include your company name, a logo, contact information, or anything else you want to display. Adding a graphic allows you to market and promote your business and allows corporations to provide information about contacting an IT administrator.

- 1 Create a version 2 PCX graphic image file that includes the information you would like to display.

IMPORTANT! The RGB color values must match the existing palette entries as used in the EasyRestore main interface. See “Main Screen Palettes for RESTORE.PCX” on page 18.

- 2 Open the RESTORE.PCX file using a graphics application.
- 3 Paste the image into the RESTORE.PCX file as shown in the following graphic.

New graphic image included on EasyRestore main screen



Main Screen Palettes for RESTORE.PCX

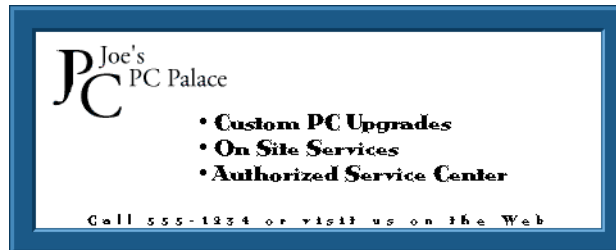
Palette Entry	Description
0	Black (RGB value 0, 0, 0)
1	RGB value 64, 76, 128
2	Green - Mixed with blue to form EasyRestore background color (RGB value 0, 128, 0)
3	RGB value 112, 114, 154
4	Blue - Mixed with green to form EasyRestore background color (RGB value 0, 0, 128)
5	RGB value 159, 156, 183
6	RGB value 206, 202, 216
7	Gray - EasyRestore dialog and button color (RGB value 192, 192, 192)
8	Dark Gray - EasyRestore button shading color (RGB value 128, 128, 128)
9	RGB value 190, 109, 167
10	RGB value 187, 0, 111
11	Light Yellow - Warning icon color (RGB value 255, 255, 0)
12	RGB value 0, 0, 255

Palette

Entry	Description
13	RGB value 210, 165, 200
14	RGB value 232, 213, 229
15	White - (RGB value 255, 255, 255)

Creating Marketing Billboards

EasyRestore lets you create one or more billboard images to help market and promote your business (see example below). Billboard images are displayed and cycled in the **Progress** dialog along with PowerQuest billboards during the restore process.



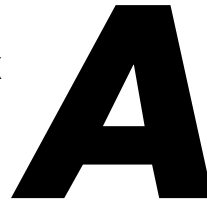
Billboard Specifications

- Billboard images must be version 2 PCX files.
- Billboard images must be named by number. For example, **6.pcx** is a valid filename, but **Joes.pcx** is not.
- The RGB color values must match the existing palette entries used in the **Progress** dialog's billboard display. See "Progress Billboard Palettes" on page 20 for specific information.
- Billboard images must be 483 x195 pixels.

Progress Billboard Palettes (1.PCX, 2.PCX, 3.PCX...)

EasyRestore lets you specify 8 of the 16 palette colors when creating a billboard image.

Palette Entry	Description
0	Black (RGB value 0, 0, 0)
1	User-definable
2	Green - Mixed with blue to form EasyRestore background color (RGB value 0, 128, 0)
3	User-definable
4	Blue - Mixed with green to form EasyRestore background color (RGB value 0, 0, 128)
5	User-definable
6	User-definable
7	Gray - EasyRestore Dialog and button color (RGB value 192, 192, 192)
8	Dark Gray - EasyRestore button shading color (RGB value 128, 128, 128)
9	Light Red - Error icon color (RGB value 255, 0, 0)
10	User-definable
11	User-definable
12	Light Blue - EasyRestore progress bar color (RGB value 0, 0, 255)
13	User-definable
14	User-definable
15	White - (RGB value 255, 255, 255)



PowerQuest Technical Support

Before Contacting Technical Support

PowerQuest is committed to providing you with comprehensive technical support. However, before contacting our technical support department, please try to resolve your problem by using this guide, the README file, and PowerQuest's corporate web site.

Tips

- Your problem may be resolved by applying the most recent patch or upgrade of the software. You can go to www.powerquest.com/updates to see if there are updates to the software.
- Your product serial number is required to obtain technical support.
- If you received a demo or trial version of the software, you are not entitled to complimentary support.
- If you use EasyRestore as a recovery tool for machines you configure for other users, PowerQuest supports your use of EasyRestore but does not provide direct support for your customers. You are responsible to provide support for end users.

Term of Technical Support

Technical support is available to all registered users throughout the life of the product, which began when PowerQuest released the product to manufacturing and ends six months after the release of the next version or when PowerQuest discontinues development of the product.

Upon registration, PowerQuest provides 45 days of complimentary technical support from the day of your first call. In addition, registered users are eligible for special upgrade pricing when PowerQuest releases a new version of EasyRestore. Contact PowerQuest Customer Service for additional information about upgrade pricing.

Contact Information

Corporate Web Site

The PowerQuest web site support.powerquest.com includes technical support information, including answers to frequently asked questions (available in English only), an overview of support options, and explanations for error messages.

E-mail

Language	E-mail (for specific technical problems)
Dutch	eurots@powerquest.com
English	help@powerquest.com eurots@powerquest.com
French	france@powerquest.com
German	germany@powerquest.com
Italian	italian@powerquest.com
Portuguese	latina@powerquest.com
Spanish	spanish@powerquest.com

To obtain e-mail technical support for specific technical questions, you can fill out the form at support.powerquest.com/emssupport.html (available in English only).

E-mail on Demand

PowerQuest maintains an e-mail on demand system to resolve common problems. You can view a list of available documents at *support.powerquest.com*. To request one of the documents, send an e-mail message to **support@powerquest.com** with the index number of the document in the subject of the message. You can only request one document per e-mail message. E-mail on demand documents are available only in English.

Fax

Location	Number
USA	(801) 437-4218
Europe	+31 (0)20 581 9270

Fax a description of your problem to the technical support fax number. This service is available in the U.S., Canada, and Europe 24 hours a day, 7 days a week. PowerQuest technicians try to respond to all fax requests within 24 hours.

Telephone

Language	Location	Number
Dutch	Netherlands	+31 (0)20 581 3906
English	Netherlands	+31 (0)20 581 3907
English	UK	+44 (0)17 1341 5517
English	USA	(801) 226-6834
French	France	+33 (0)1 69 32 49 30
German	Germany	+49 (0)69 66 568 516
Italian	Italy	+39 (0)2 45 28 1312
Portuguese	USA	(801) 226-6834
Spanish	Spain	+34 (0)91 662 51 46
Spanish	USA	(801) 226-6834

The U.S.A. call center is open Monday through Friday from 7 a.m. to 6 p.m., MST/MDT. Our European call center, located in the Netherlands, is open Monday through Friday from 9:00 to 18:00, CET.

Postal Service Mail

U.S.A.

PowerQuest Corporation
P.O. Box 1911
Orem, Utah 84059-1911
U.S.A.

Europe

PowerQuest Customer Service
P.O. Box 58287
1040 HG
Amsterdam, Netherlands

Include a detailed description of your problem and a return address, a daytime phone number, or other relevant contact information.

End User License Agreement

The following license agreement displays when an end user uses the EasyRestore system recovery software.

IMPORTANT: Read this before using your copy of PowerQuest software.

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