



AutoGuest 3.0 User's Guide

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This code is provided “as is”, and Apple Computer, Inc. makes no claims about its suitability for use in any application. AutoGuest patches Mac OS system routines, so you should install it only when necessary. Do not install AutoGuest where Mac OS itself is being qualified.

Introduction: Whence Came AutoGuest?

Overview

Ever since System 7.0 introduced Apple Events, Mac OS users could automate their work flow with scriptable applications, or applications that respond to Apple Events sent from another application. Early Mac applications created for System 7.0 were scriptable for only the standard Run, Quit, Open and Print commands. Today's Mac applications and the Mac OS itself respond to myriad standard and specialized Apple Events. AppleScript is Apple's language to create and send Apple Events. There are also third-party languages for Apple Events, like Frontier.

Scriptable applications can accept Apple Events from applications on the same Mac, and usually from applications on other Macs as well. Apple Events are sent between different Macs over an AppleTalk network. Such a network can consist of LocalTalk, Ethernet, ARA, wide area, or any other physical medium that supports the AppleTalk protocol.

The first time an application sends an Apple Event to another application (even on the same Mac), the system software establishes a data link between the two. This step is called “program linking”, and needs to occur only once until one or both of them quits. While a link exists, the two applications can send each other Apple Events. Each application may be linked to several others at the same time, and use Apple Events to send commands, gather status and share information.

When an application starts a link to a another application over an AppleTalk network, the system software displays a dialog box on the sending Mac, and asks the user to log in with a name and password. This feature is to prevent just anyone from commanding your Mac to restart, just as you were about to win a championship networked virtual reality game. When the dialog goes up, the work flow stops on the sending machine until a user responds. This is the same thing that happens when you log in to a shared file server.

Mac OS provides a way for a user at the receiving Mac to start and stop program linking, and to set log-in privileges for different users and groups. These features are configured with the same control panels used to configure file sharing.

Program linking privileges are different from file sharing in one important respect: once you get past the log-in dialog. With file sharing, you can set different privileges for different objects. You can allow a user or group access to one disk and not another, or to one folder but not the folders it contains. With program linking, if you can link to one scriptable application, you can link to all of them.

Two Problems with Program Linking

With file sharing on standard Mac OS, you can log in as a guest (if that is allowed) and create an alias to an item on the server. Later, when you use the alias, you are automatically logged into that server as a guest. This is a nice feature because it avoids the log-in dialog box. Also, an application may connect to a file server from the background as a guest without triggering a dialog box.

AutoGuest attempts to solve two problems with program linking:

(1) Unlike file sharing, there is no way to prevent a log-in dialog box when you link to a remote Mac, even if only guest users are allowed to use program linking. In fact, the dialog appears even if there is already a link to another application on the same remote Mac!

(2) If the sending application is in the background, Mac OS requires the user to bring it to the front before it displays the log-in dialog. This means, for example, that it is not possible for a background-only application to control an application on a remote machine, since there is no way the user can bring it to the front.

Solutions

(1) If guest access for program linking is enabled on the remote machine, AutoGuest tries to log in as a guest, skipping the dialog box. However, this solution only works if the sending application is in the foreground.

(2) If the sending application is in the background, AutoGuest tries to send the Apple Event anyway, avoiding user input to bring the application to the front.

Non-Solution

AutoGuest does not allow you to control a remote Mac without permission. To prevent dialogs with AutoGuest, a user at the remote Mac must start program linking and then allow guest users to use linking.

Minimum Requirements

Hardware

Macintosh Plus or equivalent.

Software

Mac OS 7.5. Earlier versions of Mac OS may work but we can offer no guarantees. (In fact, there are no guarantees at all with AutoGuest). AutoGuest 3.0 has been tested with Mac OS 7.5 through 8.5.1.

Third Party Compatibility

AutoGuest INIT 2.x was not compatible with Connectix Speed Doubler™ 8.x. The symptom is that applications can link from the foreground only. Speed Doubler™ is not at fault, it is a side effect of the way AutoGuest INIT 2.x implements that feature.

AutoGuest 3.0 was updated to work with Speed Doubler™ 8.0 through 8.1.2, but may have problems with newer versions of that product. If there is a problem, AutoGuest will notify you at startup that it is running on an “unknown Mac”.

Installation and Setup

Installation



Figure 1: The AutoGuest control panel icon.

To install AutoGuest, drag the icon to the Control Panels folder of your local Mac and restart. You can view and change settings before you restart, but they do not take effect until after you restart.

You do not need to install AutoGuest on the remote Mac. In fact, you should not install AutoGuest on any Mac unless you need to avoid program linking dialogs on that Mac. However, if you need to install it on both machines, it will work just fine.

Local Setup

Once you have installed AutoGuest and restarted, open AutoGuest and select the “On” button, then select the “Enable New Features” button. See Figure 5.

Remote Setup

Before you can link to a remote application, you must start program linking on the remote Mac, and you need to allow Guest users to use linking. This step is only required for the remote Mac, not for the local Mac.

Security Note:

Program Linking, like File Sharing, allows anyone with sufficient privileges to view, modify and delete files from another Mac. For security reasons, you should enable guest linking only when your Mac is connected to an isolated network segment, or when you are sure no one wants to link to your machine without permission.

Follow the steps in Figures 2–4 to prepare the remote Mac for guest linking.

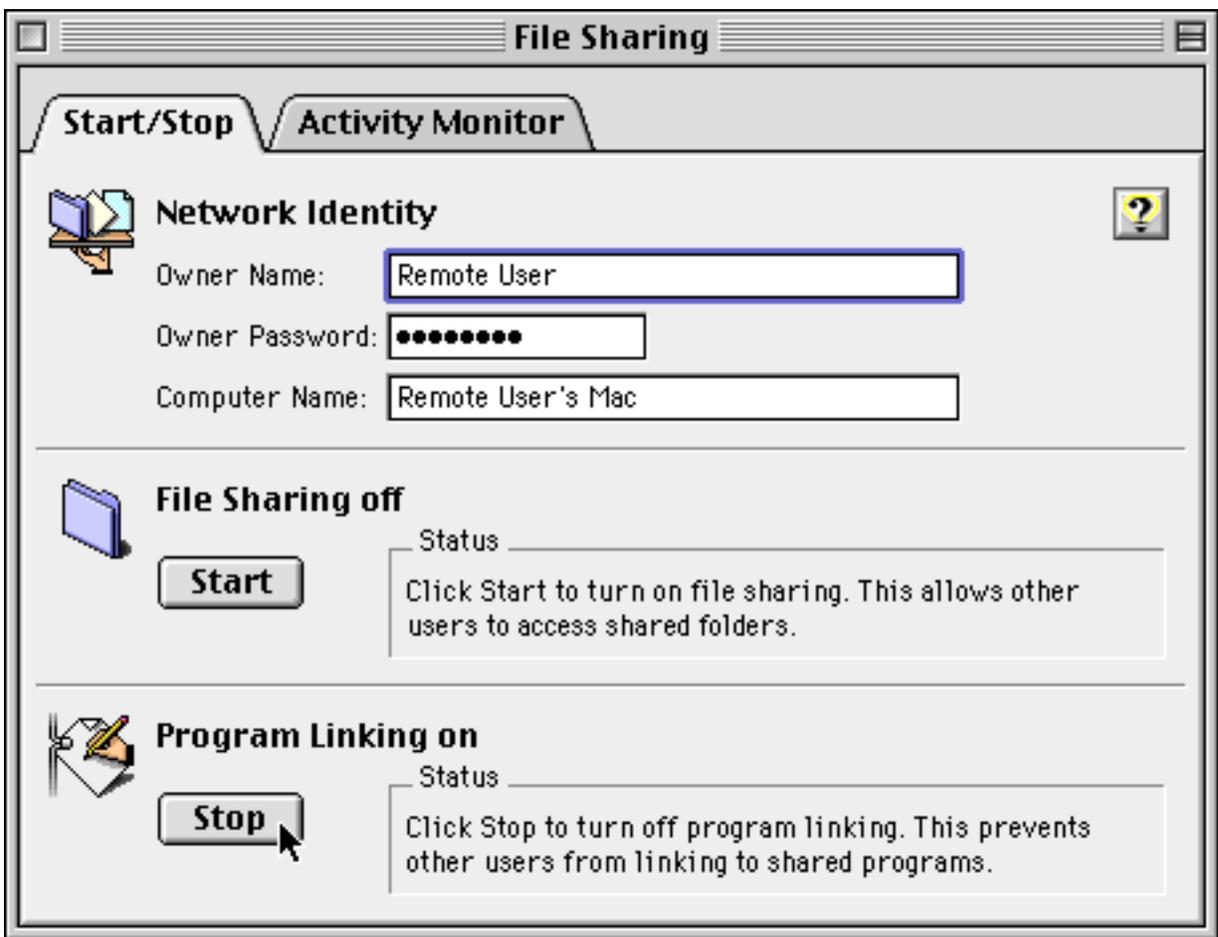


Figure 2: Start program linking on the remote Mac. File sharing is not required — it can be on or off.



Figure 3: Open the Users & Groups control panel on the remote Mac and open the guest user.

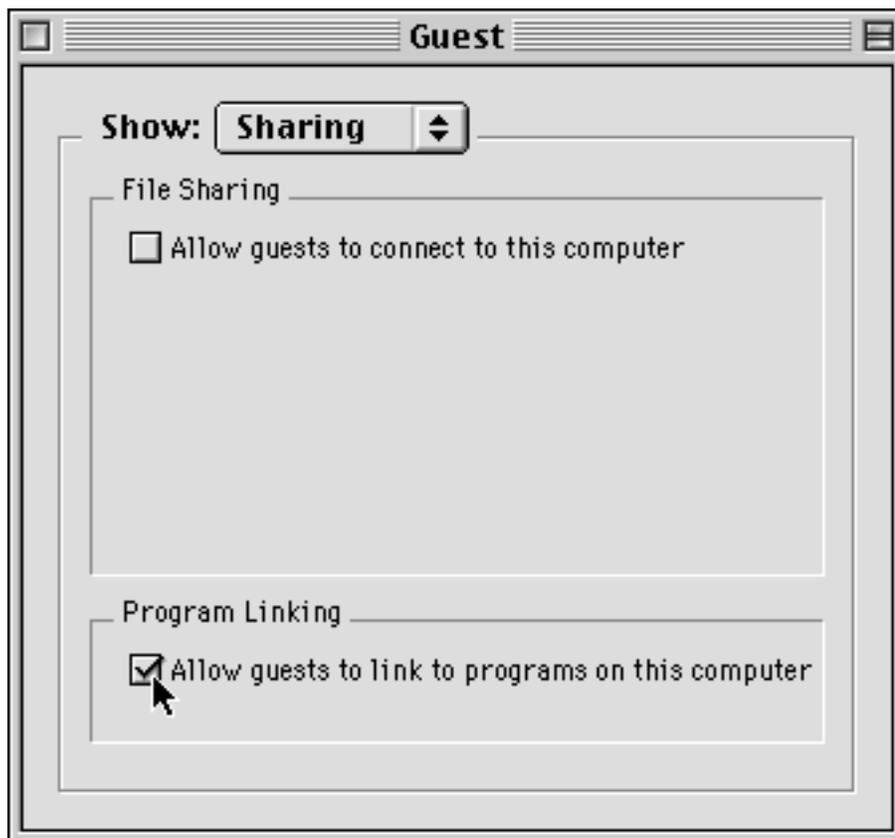


Figure 4: Choose Sharing from the popup menu, then select the checkbox to allow program linking.

Using the AutoGuest Control Panel

Settings

The AutoGuest control panel is very simple to use. You can turn AutoGuest on and off. As a compatibility measure, you can tell AutoGuest 3.0 to enable its new features, or to emulate the behavior of AutoGuest INIT 2.1.

Once you have installed AutoGuest and restarted, changes take effect immediately. When you close AutoGuest, it writes its settings to a file in your Preferences folder to retain them across restarts.

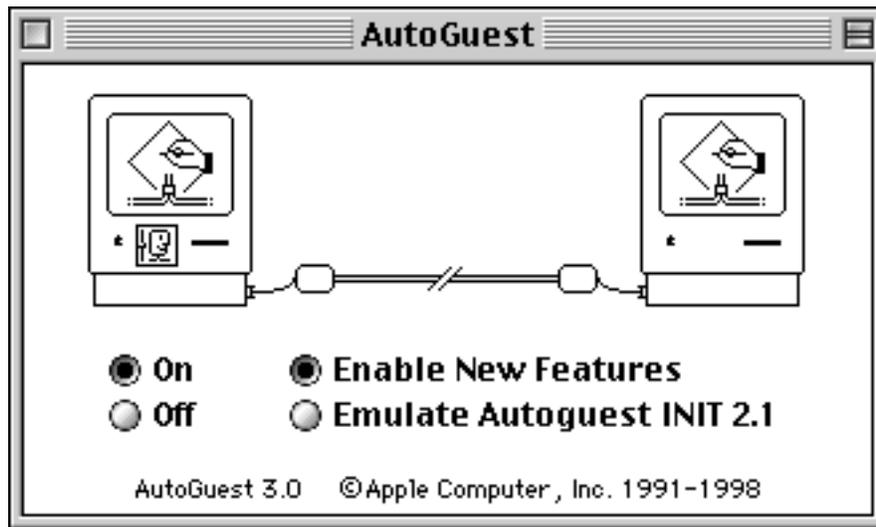


Figure 5: AutoGuest turned on. The top half of the window is for illustration only. The local Mac is represented on the left, with AutoGuest installed. The remote Mac is on the right.

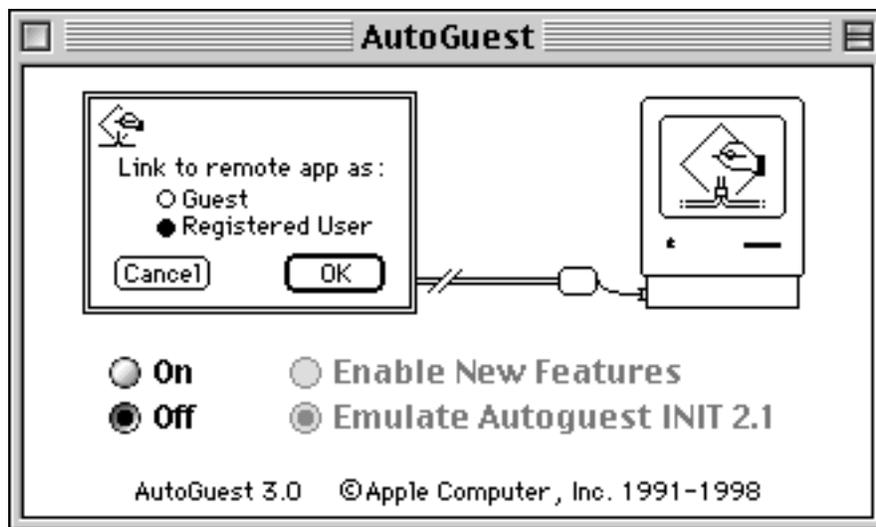


Figure 6: AutoGuest turned off. The top half of the window is for illustration only. The toy dialog box demonstrates how processing stops on the local Mac when AutoGuest is not installed.

On Line Help

AutoGuest 3.0 uses context-aware Help Balloons.

Statistics Box

AutoGuest 3.0 keeps internal statistics about how often certain features have been used since startup, and certain other internal variables. You can view these statistics by holding the option key and typing the letter “s”. To hide the statistics, type option-s again, or click in the stats box. There is no way to modify the statistics.

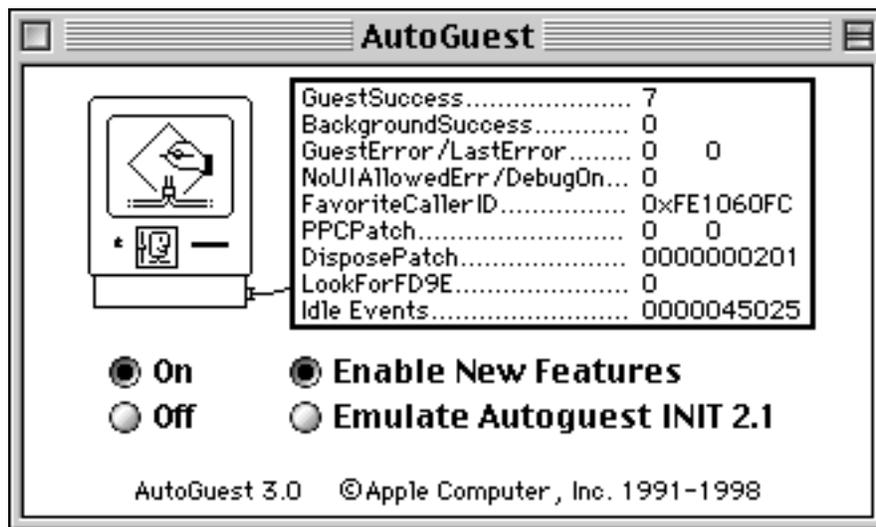


Figure 7: AutoGuest with Statistics Box showing. Type option-s to show and hide the Statistics Box.

The important statistics for the average AutoGuest user are:

GuestSuccess: This counts how many times a program on this Mac has started a link with any other program. The other program might be on this Mac or it might be on a remote Mac. Although a link on a single Mac does not show the dialog box, this number gives you a rough idea how many dialogs you have avoided.

BackgroundSuccess: This counts how many times a program on this Mac was in the background when it started a link. This gives you a rough idea how many times you would have had to bring the program to the foreground manually before it could link.

GuestError/LastError: The number on the left counts how many times a link failed. It should be zero normally. If it is non-zero, then the number on the right shows the most recent error value. If you have elected to Enable New Features, this is the number returned to the program that originated the link. If you have elected to Emulate AutoGuest INIT, the number on the left should equal the number of “random dialogs” since startup.

FavoriteCallerID: This is an internal AutoGuest value that shows whether AutoGuest thinks it is compatible with this configuration or not. If this value is “0x0”, then AutoGuest thinks it is not compatible. The likely symptom is that programs can only start a link from the foreground. If the value is non-zero like the example in Figure 7, AutoGuest is compatible.

Troubleshooting the AutoGuest Control Panel

AutoGuest 3.0 uses new self-diagnostic procedures during startup. If it can not locate compatible parts of the system software to patch, it will deactivate any features that depend on those parts, and it will notify you about the problem.

If you suspect you are having problems with AutoGuest, follow these steps:

— Run the Check AutoGuest applet. The applet links to the Finder on another Mac that you choose, and tells it to beep. You either get a dialog, or you don't (preferred).

— Verify that program linking is started on the remote Mac. Verify guest users are allowed to use program linking on the remote Mac. Whenever you install Mac OS, program linking is stopped and guest users are not allowed to link.

— Check for multiple copies of AutoGuest in your System Folder. AutoGuest INIT went in the Extensions folder. Remove all copies of AutoGuest INIT, and put only one copy of AutoGuest in the Control Panels folder.

— Is there a problem when the sending application is in the background?
Check the Mac OS version. AutoGuest may not work with versions of Mac OS older than 7.5 or newer than 8.5.1.

If you are using Connectix Speed Doubler™, check the version. AutoGuest may not work with versions of Connectix Speed Doubler™ older than 8.0 or newer than 8.1.2.

You may need to configure your work flow so the sending application is in front each time it starts a link to a remote application. Once a link is established you can put the application in the background.

— Show the Statistics Box (see Figure 7). If the value labeled "FavoriteCallerID" is equal to "0x0", then AutoGuest did not find the system feature it needs to enable background linking. Applications can start a link from the foreground only.

— Turn AutoGuest off

Then, next time you see the linking dialog, make sure the Guest radio button is enabled. If you can not select the Guest option, AutoGuest can not select it, either.

When you turn AutoGuest off, a small part of it stays resident, so you can turn it on again. In the rare case that you want to remove AutoGuest completely, use the Extensions Manager to move it out of the Control Panels folder, then restart. To restore AutoGuest features, put it back in the Control Panels folder and restart.

Acknowledgements

Many thanks to:

- Apple Computer, Inc. for creating Mac OS, AppleScript, Virtual User, and lots of other cool stuff that uses Apple Events
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- Stuart Russell for creating AutoGuest 3.0

Historical Note

AutoGuest INIT 1.0 was first released in 1989. It was followed by AutoGuest INIT 2.0 in 1991. AutoGuest INIT 2.1 was created in 1996 to support System 7.5 and PCI-based Power Macs. AutoGuest 3.0, released in 1998, is the first version of AutoGuest as a control panel. It has a modified AutoGuest INIT 2.1 as its core, and adds a human interface, some bug fixes and a dash of fun.