

NOTE #: 06-037-1

DATE: 4 May 2006

APPLICATION NOTE

SHARING INTELLIGENT SOLUTIONS

KEY WORDS:

Title:	Running C-Gate On A Mac Operating System
Products Applicable:	C-Gate V2



This information is provided as-is, with no warranty and no technical support. Clipsal Integrated Systems do not use Mac computers as part of their normal business, so support cannot be provided for users running C-Gate on a Mac.

Introduction

C-Gate is written in pure Java. This means that C-Gate can operate on many different platforms and operating systems as long as a version of Java later than 1.3 is supported.

This note shows you how to install and run C-Gate on Mac OS X Tiger (10.4.x). It explains:

- how to install C-Gate on OS X
- how to run C-Gate on OS X
- how to connect to C-Gate on a Mac from Toolkit running under Windows.

C-Gate Works On Multiple Platforms

C-Gate is written in standard Java. It can be run successfully on any platform where a Java 1.3 or later Java VM is available or can be installed. This includes Linux, Mac OS X and other Unix varieties.

Mac OS X Version 10.4 (known as Tiger) has a Java 1.4 or later VM, so this has built in support for C-Gate.

However, the standard distribution of C-Gate comes as an installer for Windows. It is easy to extract C-Gate from this installer, which will be explained later.

How To Install C-Gate On Operating System X

The latest release of C-Gate comes with the C-Bus Toolkit Software, so the first thing we need to do is download and install the C-Bus Toolkit on a Windows computer so we can then extract C-Gate to put on another platform:

- 1) Go to a computer. Download the **C-Bus Toolkit Software** from the CIS Website at <http://www2.clipsal.com/cis/technical/downloads/software/toolkit>. Install this to the Windows computer, but make a note of the place that the C-Gate installation is installed. This is normally C:\Clipsal\C-Gate2.
- 2) Now, we need to transfer the C-Gate2 folder over onto the Mac. There are a few different ways to do this, such as zipping the folder and copying it onto a memory stick or iPod, or enabling file sharing between the PC and the Mac. Here, we are going to arrange to start Windows file sharing on the Mac, and then transfer the files that way.
- 3) To begin, connect the Mac and PC to the same network. In most cases, the Mac will be able to allocate itself an address using DHCP automatically.
- 4) On the Mac, Under the Apple menu, select System Preference. The System Preferences window will open.

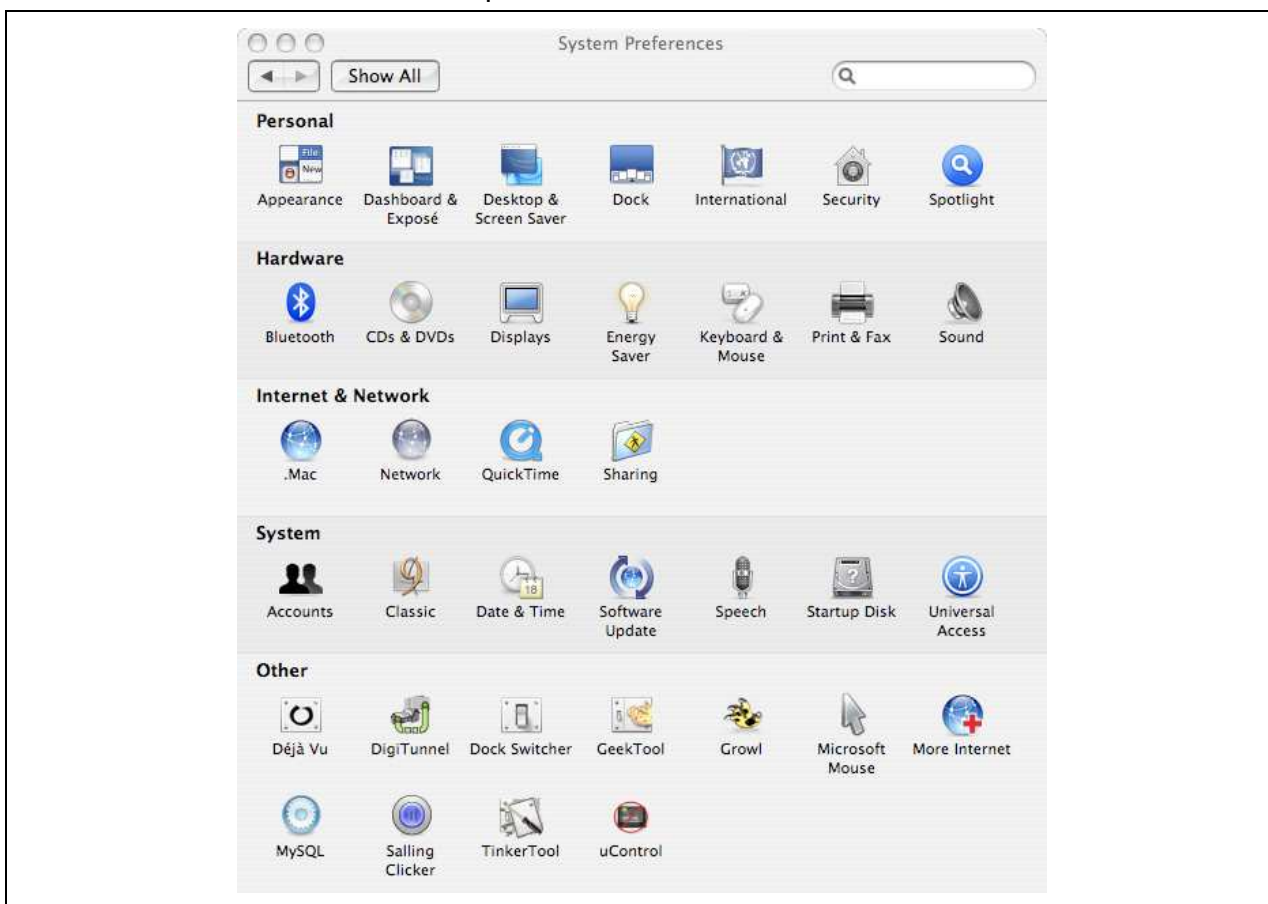


Figure 1: System Preferences window.

- 5) Click on the Sharing icon.

6) The sharing window will then open.



Figure 2: Sharing Window.

- 7) Click the checkbox beside Windows Sharing. If you need to, you will be asked to enable a user account for Windows Sharing. Click the Enable Accounts button and select the user you want to share with Windows computers.



Figure 3: Configure sharing parameters.

- 8) In the enable screen, enable any users you need to enable, and supply the relevant passwords. Click Done.

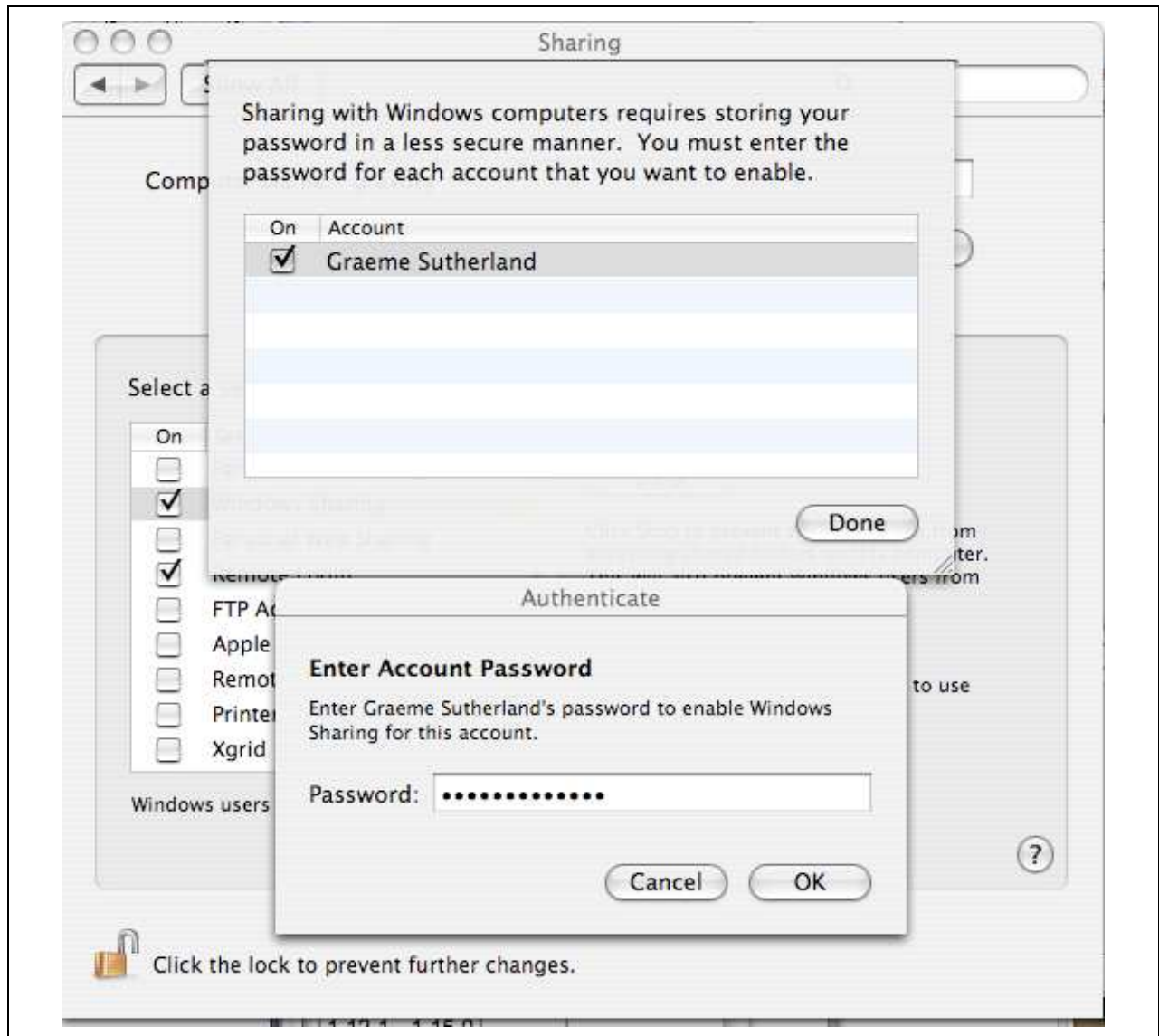


Figure 4: Assign required passwords.

- 9) Now, you'll need to note down some details of the Mac's address for Windows Networking at the bottom of the Sharing preference pane. See excerpt below.

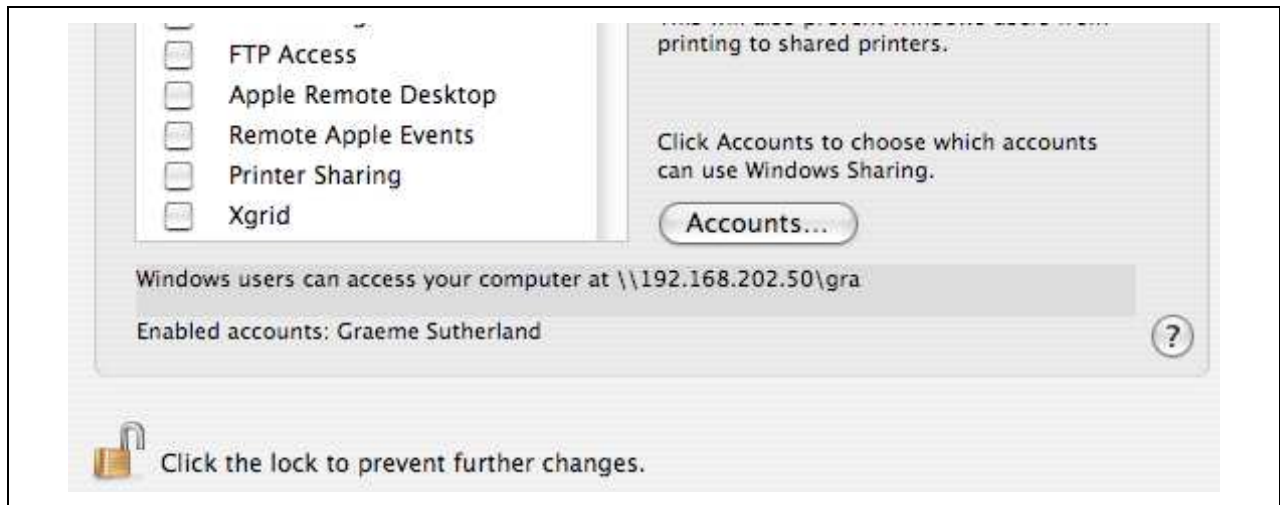


Figure 5: Window access details.

- 10) You are looking for a line that says something like

"Windows users can access your computer at \\192.168.202.50\gra"



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Note down these details given. This is what you'll type in to Windows Explorer to find your Mac and share its files. And you'll need that IP address (the 192.168.202.50 bit) later.

- 11) Go to your windows computer and type the address into Windows Explorer. It should open an Explorer window showing the home directory of the account you enabled for Windows file sharing.
- 12) Drag the C-Gate2 folder from your PC's directory, into the home directory on the Mac that is opened in Windows Explorer. Files will be copied across, creating a C-Gate2 folder on the Mac.
- 13) C-Gate is now installed on your Mac, in a folder called C-Gate2 in the home directory of the account you enabled.

There are lots of other ways of getting C-Gate onto the Mac you could try if this is difficult or does not work. For example you could copy the C-Gate2 folder onto a USB memory stick or other USB device or write it to a blank CD or DVD.

Running C-Gate On Operating System X

About the Terminal application

Beneath Operating System X's user interface, lies a full implementation of Unix, including the Unix command line shells.

Operating System X provides the Terminal application to provide a command line window, which allows Telnet to be used to access C-Gate's command sessions.

To start terminal either:

- click on the spotlight item (magnifying glass in the top right of the menu bar) and type Terminal then select the **Terminal** application (icon looks like an old glass Terminal)
- double click the **Terminal** application you can find in the Utilities Folder in the Applications folder. See below.

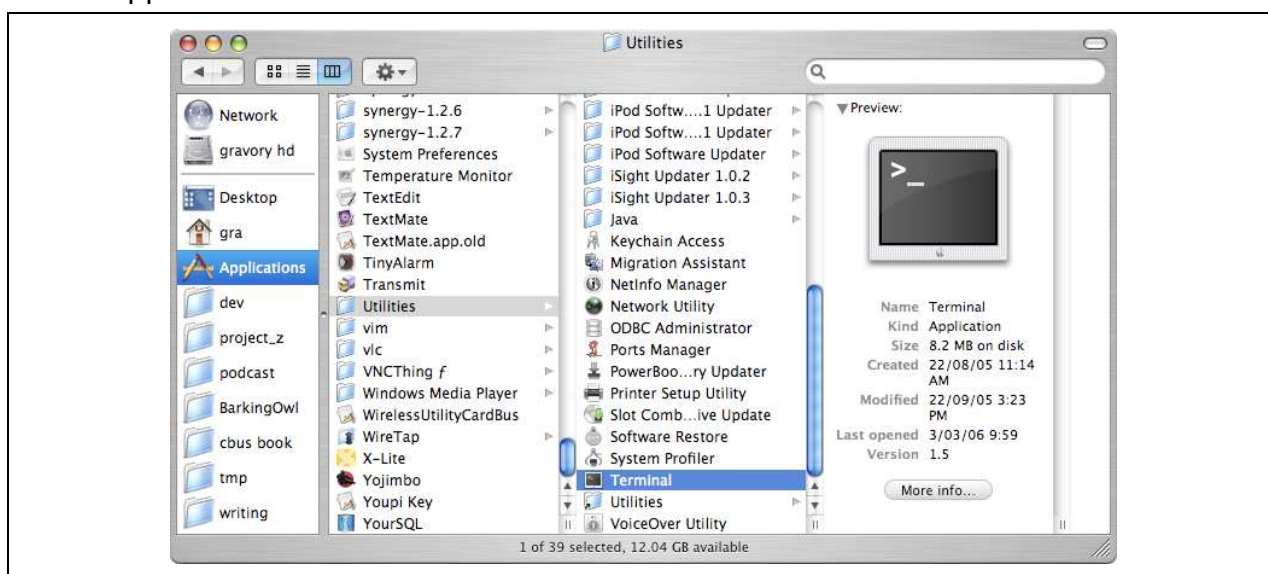


Figure 6: Utilities Window.

Starting C-Gate from the Command Line

Open Terminal (as described previously) and type the following commands:

- `cd C-Gate2`
- `java -jar cgate.jar`

This will start C-Gate in the terminal window that you typed the commands into. C-Gate will respond with the usual startup messages:

```
Clipsal C-Gate(TM) v2.3.46 (build 2079)
Hardware key: Hardware Key system not available (error: java.lang.UnsatisfiedLinkError: no sspro16 in
java.library.path)
License file found:
  Customer Name:  PUBLIC
  Location:      PUBLIC
  License type:   PUBLIC
  Network licenses: 2
  Expiry:        December 31, 2099
Total network licenses: 2
```

Figure 7: C-Gate startup messages.

Don't worry about the line indicating a hardware key error, this is simply complaining about a missing library needed for operating C-Gate on Windows platforms only. C-Gate will send its standard event output to this window, so you can watch it operating. If you hold control and press C or close the window, you will stop C-Gate.

Command Interface

Once C-Gate is running, you can either type commands directly into the terminal window (for example type `noop` and hit return) or open a separate command interface to C-Gate.

To run a separate command interface, open another Terminal window and then type `telnet localhost 20023` and press return:

```
host:~ user$ telnet localhost 20023
Trying ::1...
Connected to localhost.
Escape character is '^]'.
201 Service ready: Clipsal C-Gate Version: v2.3.46 (build 2079)
```

Figure 8: Connecting a telnet session to C-Gate.

You now have a standard C-Gate command session you can type commands into and receive responses.

Auto-starting C-Gate with Mac Operating System X

To automatically start C-Gate when you log in, we provide a small application called `CGate.app` that kicks off C-Gate in a Terminal window. This can then be added to the Dock by dragging it there.



This will only work if you install C-Gate as described above, in a folder called **NOTE** `C-Gate2` off your home directory.

Once in the Dock, hold down Control or ctrl and click the icon. Then select the Open at Login option. Alternatively, you can add `CGate.app` to the Login Items tab in the Accounts Preference Pane (select Accounts in System Preferences).

Using Toolkit with C-Gate on Operating System X

**NOTE**

It may be possible to run the C-Bus Toolkit in a virtual Windows installation on your Macintosh by using Microsoft's Virtual PC. We haven't tested this at time.

Toolkit on a PC can connect to the C-Gate running under OS X across your local network.

To do this, you need to tell C-Gate to allow the connection by changing C-Gate's access control, and then connect to the Macintosh's IP address from Toolkit.

Here are the steps required:

- 1) Find the IP address of your Macintosh that is running C-Gate. If you set up Windows file sharing as explained earlier, you'll have noted the IP address, in which case you can use that one. Otherwise, you can find out from the Networks Preferences.
- 2) Once you have an IP address, start C-Gate if it is not already done, and then type the following commands to C-Gate via a telnet session in a separate terminal window:
 - `access add interface ip_address Program`
 - `access save`

Where `ip_address` is the IP address of your Mac on the local network. In the example above, that was 192.168.202.50.

This updates C-Gate's access control to allow connections from the network connected to the interface with your IP address, meaning anybody can connect from you local Ethernet/wireless network.

Alternatively, you could also edit the `access.txt` file in the C-Gate's config directory and add the access control information there. In this case, you'd add a line that looked like:

- `interface ip_address Program`

- 3) If you have OS X's firewall turned on, we need to set up some rules to allow access to C-Gate from the local network. From the Apple menu, select System Preferences... and then select the Sharing preference pane. Click on the Firewall tab.

If the Firewall is On, we need to add some rules to allow Toolkit to access C-Gate. Click New, under Port Name select Other. Under TCP Port Numbers enter 20023-20026, 20123-20126. Leave UDP Ports blank, and then write C-Gate in the description field. It should look as below. Click OK.

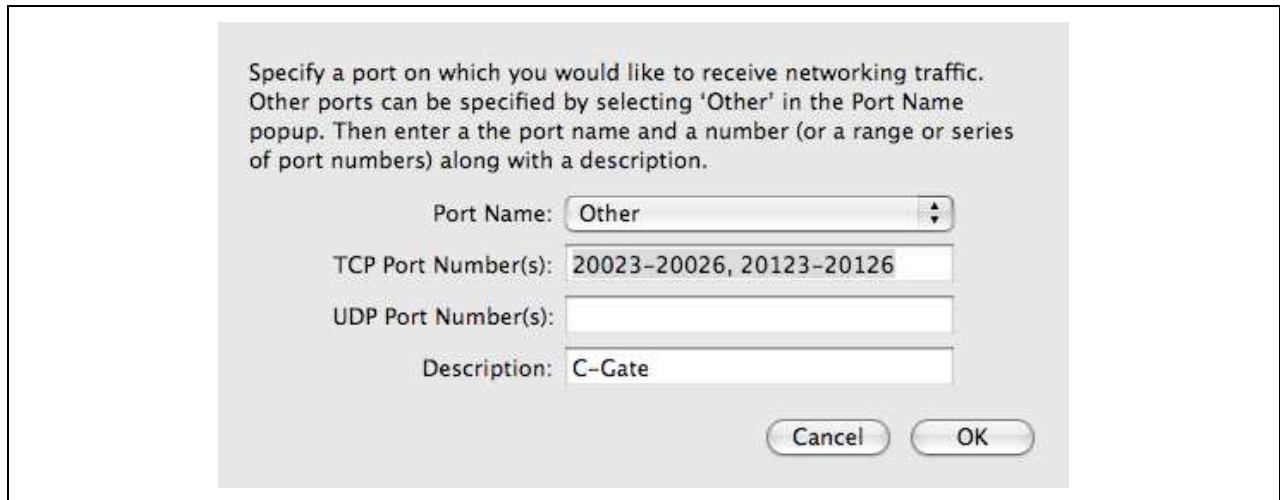


Figure 9: Firewall settings.

The resulting firewall setup should look like the figure below.



Figure 10: Sharing Window with C-Gate showing.

This means that Toolkit will be able to connect to C-Gate, and C-Gate will accept the connection.

Now, it is time to try out Toolkit.

- 4) Start Toolkit on your PC. Now, under the File menu, select Disconnect Project Repository. Now, under the File menu, select Connect to a Remote Project Repository.

Under Site Name, put something memorable, like C-Gate, then put the IP address of you Mac in the IP Address fields. See below.

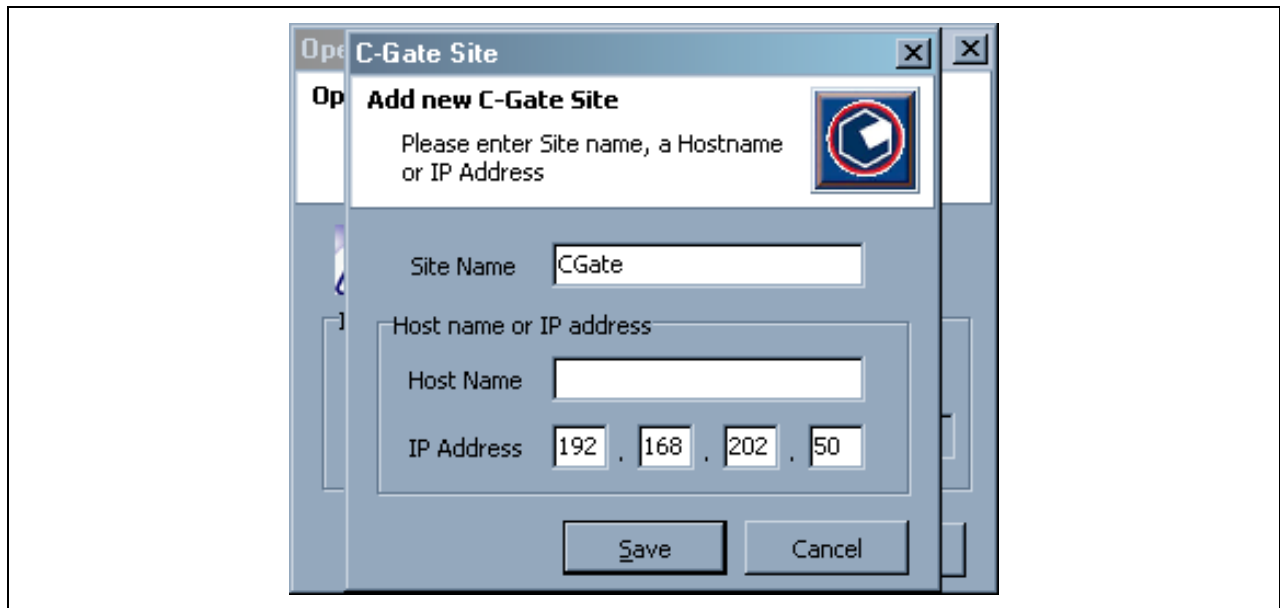


Figure 11: Connecting to a Remote Repository.

Click Save and then OK. Toolkit will now connect to C-Gate and be able to work with the projects stored with C-Gate on your Mac.



NOTE

The projects are stored on your Mac, not on your PC. To get them onto the PC, you'll need to use Toolkit's project archive/restore to move them to and from your PC.

Useful References

[Mac OS X Unix Tutorial](#)

- <http://www.osxfaq.com/Tutorials/LearningCenter/>

[Mac OS X Hints](#)

- <http://www.macosxhints.com/>

[C-Gate Threads in C-Bus Forums](#)

- <http://www.cbusforums.com/forums/forumdisplay.php?f=2>

Technical Support and Troubleshooting

For technical assistance call: 1300 722 247 (Australia)
0800 888 219 (New Zealand)

CIS web site: <http://www.clipsal.com/cis/>

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