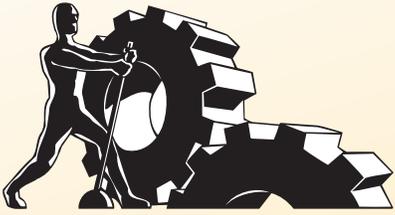


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Read Me First

Welcome to *Take Control of Calendar Syncing and Sharing with BusyCal*, version 1.1, published in August 2013 by TidBITS Publishing Inc. This book was written by Joe Kissell and edited by Adam Engst.

This book explains the fundamentals of calendar syncing and sharing in OS X and iOS in a simple, nontechnical way. It covers the use of BusyCal 2.5 (and, where it's useful for BusyCal users, the Calendar app in OS X and iOS) with calendar-sharing services such as iCloud, Google Calendar, and Office 365.

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Basics

Here are a few rules of the road that will help you read this ebook:

- **Links:** All blue text in this ebook is *hot*, meaning you can click (or tap) it, just like a link on the Web. If you click a link to switch to a different part of the ebook, you can return quickly to where you were if your ebook reader offers a “back” feature. For example, if you use iBooks in iOS to read the EPUB version of this ebook, you can tap the “Back to” link at the lower left of the screen. Or, if you use Preview on the Mac to read the PDF version of this ebook, you can choose Go > Back or press Command-[.
- **Menus:** Where I describe choosing a command from a menu in the menu bar, I use an abbreviated description that puts the name of the menu ahead of the command. For example, at the end of the previous paragraph, “Go > Back” means “choose the Back command from the Go menu.”
- **OS X names:** I sometimes mention features specific to particular versions of OS X, which Apple normally refers to by their names rather than numbers—for example, Mavericks is OS X 10.9 and Mountain Lion is OS X 10.8. To find out which version of OS X your Mac is running, choose Apple  > About This Mac.

- **Contextual menus:** In OS X, when you hold down the Control key and click, a pop-up *contextual menu* appears, with commands appropriate to whatever is under the mouse pointer. Control-clicking nearly always works to open a contextual menu, but your mouse or trackpad might support a better method. The default behavior, the alternative methods, and the ways to set them vary depending on the type of input device; the typical alternative (for right-handed users) is to *right-click* with a mouse—click the right-hand mouse button—so that’s the term this book uses by default for the action that opens a contextual menu.

What’s New in Version 1.1

Version 1.1 of this book covers BusyCal version 2.5, which adds support for Exchange accounts (including Office 365). As a result, I’ve made extensive changes throughout the book and added several new topics, including [Office 365](#) and [Share Office 365 \(Exchange\) Calendars](#).

Introduction

Considering the variety of fantastically complicated tasks computers can do with ease—converting spoken words to text, rendering 3D animation, sequencing genomes, and so on—something as pedestrian as keeping one’s calendar in sync among several devices should be easy, right? How tough can it be to get a handful of dates, times, and event details to be the same on multiple devices? This seems like the sort of thing that should have become a non-issue about 20 years ago.

And yet, somehow, many of us still struggle daily to get appointments, meetings, and tasks to show up the way we expect on our Macs, iPhones, and other devices. The services that were supposed to make this simpler, such as iCloud, Google Calendar, and Office 365, have in some cases merely added layers of complexity. And if you share calendars with other people or manage meetings for which you want to track invitees’ availability, it gets even more confusing. It should all Just Work, but too often, it Just Doesn’t.

Part of the problem is that companies providing calendar services—Apple, Google, and Microsoft, I’m looking at you—have typically done a poor job educating their users about what’s going on behind the scenes and how to make wise decisions about calendar use. They tell you *what* to do (click here, enter such-and-such an address in this field) but not *why*.

The rather quixotic task I’ve agreed to undertake in this book is to untangle this tricky business of calendar syncing and sharing in a way that ordinary, nontechnical folk can easily grasp—and to do it in about 50 pages. I’ve written this to help you understand and make the most of a system that is, to be honest, kind of twisted and inconsistent. I hope that by learning more about how calendar services and applications work, you’ll become more comfortable and confident in setting up, syncing, and sharing calendars.

You may already be familiar with the Calendar app that comes with OS X (where it was formerly called iCal) and iOS. BusyCal 2, which I focus on in this book, is a replacement for the Calendar app on OS X—one I’ve used personally for years. It looks superficially similar to the Calendar app and has many of the same features, but it’s easier to use, more customizable, and more flexible than what Apple offers. In most

cases (with a few exceptions that I discuss later), BusyCal and the Calendar app can share the same data, which means you can switch back and forth seamlessly if the need arises.

However, this book is not intended as a user guide for BusyCal. We didn't title this book *Take Control of BusyCal*, and for good reason: BusyCal already has thorough instructions, which you can find at <http://www.busymac.com/help/>. The online help already does an excellent job of explaining *how* to do stuff in BusyCal. I focus on explaining *why* things work the way they do (and what doesn't work) so you can make smart decisions about managing your calendars.

By the time you're finished reading this short book, you should understand the basics of how calendar servers and clients work, when and why to use iCloud, Google Calendar, or an Exchange server (including Office 365) for syncing and sharing, and how to construct a sensible calendar strategy using BusyCal 2 on your Mac—even if you also use other calendar apps or share calendars with people who do. Along the way, I'll guide you gently but firmly toward practices that will make your life easier and try to dissuade you from those that will add unnecessary complication and pain.

BusyWho?

This book assumes you have BusyCal 2.5 or later (although it mentions Apple's Calendar app for OS X and iOS where appropriate). BusyCal is a calendar app from BusyMac (<http://www.busymac.com/>) that works in OS X 10.8 Mountain Lion or later. If you don't already have it, I highly recommend it because it eliminates many of the irritations of Apple's Calendar app and adds useful new features. It's available from the Mac App Store (<http://www.busymac.com/buy>).

BusyCal is ideal for individuals, families, and small workgroups who want to sync and share their calendars. And, with the support for Exchange servers and other new features added in version 2.5, it's even a great fit for most enterprise users, on par with Outlook's calendar capabilities.

Calendar Syncing and Sharing Quick Start

You may not need to read this entire book, but because later chapters build on earlier ones, I recommend reading the book in order and skipping any portion that doesn't apply to you. (For example, if you never share calendars over a local network or invite people to meetings, there's no need for you to read the chapters about those topics.) In any case, please start with [Understand Calendar Basics](#), which lays the groundwork for everything that follows.

Start on the right foot:

- Get a grip on important concepts and terms; see [Understand Calendar Basics](#).

Sync and share your calendars:

- Connect to calendars hosted on iCloud, Google Calendar, Office 365, and other calendar servers with BusyCal on your Mac; see [Sync Calendars with the Cloud](#).
- Give friends, family members, and colleagues read-only or read-write access to your calendars; see [Share Calendars with Other People](#).
- Find out if you're one of the few people who should be sharing calendars over a local network instead of the cloud; see [Share Calendars over a Local Network](#).
- Invite people to meetings, track responses, and deal with the complexities of meeting invitations; see [Manage Meetings](#).

Understand Calendar Basics

We've come a long way since the days of manually syncing iCal on our Macs with our PDAs using iSync. (Remember that? If not, count yourself lucky. That was not a happy time.) But some old, outdated concepts have stuck around in our collective unconscious, while some new concepts haven't quite taken hold. As a result, many people have a mental picture of how calendars work that's, well, out of sync with reality!

In this chapter, I paint a new image for you that puts everything in its proper place, without getting too technical. I start by defining some terms and talking about how calendar clients and servers interact (I go into more detail in the next chapter, [Sync Calendars with the Cloud](#)). I end the chapter with guidance on developing your own calendar strategy, with links to specific discussions later in the book.

Get an Overview of Important Concepts

If you're like me, you will arrive at this section ready to skip it. "Hey, I know what a calendar is! I don't need to read a bunch of boring definitions," you may be thinking. Fair enough; I definitely don't want to bore you. But please stick with me for the next few pages, because you may find a few surprising facts along with confirmations of things you already knew or guessed.

Here are the crucial concepts I want to be sure you understand:

- **Event:** An *event* is any activity you want to keep track of that's associated with a date and/or time. In other words, event is a generic term that can apply to anything you might put on your calendar—a birthday, holiday, appointment, meeting, whatever. Some events specify only a day, or a range of days, while others are scheduled for a precise number of minutes or hours, and others recur according to some pattern. But the fact that *some* date or time comes into play is what separates events from tasks.

- **Meeting:** A *meeting* is an event that involves multiple participants. For the purpose of this book, however, we're only talking about events to which you've electronically invited other people (or have been invited by someone else) in such a way that each participant can set their status (such as accepted or declined).
- **Task (a.k.a. Reminder or To Do):** A *task* is something you want to keep track of that isn't assigned to occur at a specific time. (BusyCal refers to a task as a "to do," while Apple uses the term "reminder"—all three terms refer to the same thing, but I largely stick with "task" to keep it generic.) A task might have no scheduled time at all, or it might be assigned to a date but not a time.

Unlike all-day events such as holidays, which occur on a specific date, tasks can carry forward on your calendar until the date that you mark them as completed. That means if you create a task to pick up the dry cleaning on Thursday and you don't check it off, it'll automatically carry forward on your calendar to Friday.

- **Calendar:** A *calendar* is essentially a collection of events, tasks, or both. You might have a single calendar that contains all your events or several different calendars (for example, one for personal items, one for family items, and one for work items). Every calendar can have a name and a color to help you identify its events in BusyCal or Apple's Calendar app.
- **Server:** A *calendar server* is a computer program that stores calendars for any number of people and makes their data available over a network (usually the Internet) using any of several standard *protocols*, or methods of transferring data.

There are several kinds of calendar servers, including the widely used Microsoft Exchange Server (which also powers the calendar, contacts, and email portions of Office 365), and CalDAV, the most common industry-standard calendar protocol (iCloud, Google, Yahoo Calendar, and Fruux are all CalDAV servers).

If you're interested in the nitty-gritty of how CalDAV works, or are having trouble sleeping, you can read the details of the protocol at <http://caldav.calconnect.org/>. The short version is this: CalDAV extends WebDAV to be used for transferring data in iCalendar format between clients and servers (where WebDAV is a file-transfer protocol based on HTTP—the protocol of Web servers—

and iCalendar is a simple text-based format for event and task information). You absolutely do not need to understand any of that, but I thought you might be curious.

- **Client:** A *calendar client* is a program (or app) that runs on a computer or mobile device and connects to a calendar server. The client is what displays your calendars on screen, lets you edit them, and irritates you with all those alarms and pop-up windows you forgot you requested. BusyCal and the Calendar app are both clients for CalDAV and Exchange servers.

In most cases, a client keeps a complete copy of everything in the server-based calendars you connect to, so that you can see and use your calendars even when you're not online. In addition, most clients also give you the option of storing calendars *locally*—that is, right on the device you're using *instead of* on a server. (I'll have more to say about local calendars in the chapter [Share Calendars over a Local Network](#).) For now, if you're wondering where your calendar lives, the most likely answer is that it is stored both on the device you're using *and* on a server somewhere on the Internet.

The one and the many: *A given client can connect to more than one server at the same time. For example, BusyCal can show iCloud calendars alongside Google calendars.*

- **Cloud Sync:** The overused and overhyped term “cloud” has, appropriately enough, a rather nebulous definition. It's often used to mean something like “existing somewhere on the Internet.” But that could be true of any server. Cloud services, such as iCloud, Google Calendar, and Office 365, use many computers, in geographically diverse places, to store and distribute data. That way, even if a single server or router were to fail, there would still be multiple paths between your client and the data you want to connect to—it's not just in one place, it's in many. From the client's point of view, syncing a calendar to “the cloud” works exactly the same way as syncing to a single CalDAV or Exchange server; the only difference is the infrastructure used on the other end. As a result, in this book I don't generally distinguish between syncing to a single server and syncing to the cloud.

Syncing involves the client and the server matching up their records and making sure the most recently modified bits on either end are

reflected on the other. Whenever an event changes, it gets a time stamp, so the client and server usually have very brief conversations about only those events for which the timestamps don't already match. I explain how to set up cloud sync in the next chapter, [Sync Calendars with the Cloud](#).

- **Fetch and Push:** When the client asks the server if there have been any recent changes, that's called a *fetch* update. When the server says to the client, "Hey, I've got some fresh new data for you here!" that's called a *push* update. Fetch updates can happen on a fixed schedule (such as every 10 minutes) or manually; push updates happen as soon as the data changes on the server. Several different methods of push updates exist, but the details aren't important for this discussion. Suffice it to say that for push to work, the server must support it, the client must have push turned on, and there must be a live network connection between the two.

All things being equal, push is usually better than fetch because it reduces the chances that the same piece of data will change in more than one place in between syncs, which would result in a conflict. However, please be aware of the following points:

- Not all calendar servers support push updates from server to client. Notably, iCloud and Exchange 2010 or later (including Office 365) do, but Google Calendar and Exchange 2007 do not.
- Notice how I said "from server to client" in the last point? That's key, because all clients, and all servers, regardless of their settings, support push updates from the client to the server. For example, if you update an event in BusyCal on your Google Calendar, that change is sent to Google immediately, and if you were to check the Google Web site, you would see it right away. However, a client running on another device won't reflect that change until its next scheduled (or manually initiated) fetch.
- **Sharing:** You can make a calendar of your own available to other users so that it syncs with their calendar clients too. In this book, I generally use the term "sharing" for this activity, although it's sometimes referred to as *delegation* (see [Work with Delegation](#), later). For cloud-based calendars, the server handles the sharing.
- **LAN Sharing:** When calendars are shared between Macs on your Wi-Fi or Ethernet local area network (LAN) rather than

over the Internet, that's *LAN sharing*. BusyCal supports LAN sharing, but Apple's Calendar app doesn't.

However, there's more to LAN sharing than first meets the eye. BusyCal doesn't act as a CalDAV server on your local network; instead, it uses a simpler publish-and-subscribe model. Any copy of BusyCal on your network can act as a server, *publishing* one or more calendars to make them available to other Macs, and any copy of BusyCal can also act as a client, *subscribing* to calendars published by other Macs on your network. Because any given copy of BusyCal can simultaneously act as a server and a client, this arrangement is sometimes called *peer-to-peer* networking.

With those crucial terms clarified, I want to expand a bit on the notion of syncing calendars on a Mac or iOS device with a server.

Learn about Syncing with a Server

I started this chapter with a reference to the bad old days of calendar syncing, in which your Mac held the master copy of your calendar and had to be tediously synced from time to time, over a wired connection, with your mobile devices. But those days are long gone, and I urge you not to think about calendars that way anymore. If you learn just one thing from this chapter, it should be the following:

When you're syncing calendars with a server, the server—not the client—holds the master copy of your data.

In this respect, calendar servers and clients work much like the IMAP servers and clients you probably use for email. The app running on your Mac or iOS device has a copy of all your data, of course, but that's merely a reflection of what's on the server. Making any change locally immediately pushes that change up to the server, updating the master copy. The changes can then propagate down from the master (via push or fetch) to all the other devices that connect to the same account.

Because every change to your calendars, from any device, goes through that central hub before flowing out to the other devices, your Mac doesn't sync *directly* to your iPhone, say, or another Mac. Instead, everything syncs to the cloud independently. Your Mac isn't the hub; the server is.

Just as you no longer sync two devices directly to each other, you also don't sync two *servers* to each other. Although it was once possible to use BusyCal as a makeshift hub to republish an iCloud calendar to Google Calendar (see the sidebar [Farewell to Republishing](#), next), it was never a very good idea and is no longer possible in BusyCal 2. Don't worry about Google Calendar and iCloud showing you exactly the same calendars—madness lies that way. Instead of trying to mirror calendars on completely different servers, simply connect to each of the servers separately on each device.

I should mention, however, that not all servers are created equal. Even though iCloud and Google Calendar both use CalDAV, their capabilities don't align precisely. Read [Learn about the Major Calendar Server Providers](#) for more details on the differences.

Farewell to Republishing

If you used BusyCal 1.x, you may be aware that it had the capability to take an iCloud calendar and republish it to Google Calendar, or to republish an iCloud or Google calendar over your LAN. (If you weren't aware, you didn't miss anything important. You can skip the rest of this sidebar. Move along—nothing to see here.) That capability is gone in BusyCal 2.

One reason republishing no longer exists is that it was inherently fragile; because of the many variables involved in the process that were beyond BusyCal's control, republishing often didn't work reliably, and it led to considerable confusion and grief.

But a more important reason for the change is that it encouraged unnecessarily complicated calendar setups. Letting each client connect to each server independently is much more efficient. Since BusyCal and the Calendar app can connect directly to iCloud, Google Calendar, and Exchange servers at the same time, the biggest reason to republish was to make your iCloud calendars available to yourself on the Google Web site, so that if you were checking your calendars in a browser, you could see them all in one place instead of going to two different sites. It also enabled you to make calendars that were stored on one cloud-based service available in another, for the benefit of those who don't have accounts with the service you use. Although you lose those small conveniences in BusyCal 2, you gain a simpler and more reliable setup.

Develop a Calendar Strategy

Now that you have the basics of calendars and calendar syncing under your belt, your next task is to develop a sensible calendar strategy for yourself (and perhaps for your family or business). Let me begin by laying out a few key suggestions that will make your life easier:

- If possible, use only cloud-based calendars. Even though you can create local calendars in BusyCal or the Calendar app that show up only on the device you're using, doing so makes syncing difficult, if not impossible.

Note: Because BusyCal 2 no longer supports OS X's Sync Services framework, *local* calendars in BusyCal 2 don't sync with Apple's Calendar app, or with iOS devices via iTunes. Similarly, local calendars no longer sync to third-party apps that use Sync Services, such as Microsoft Entourage or Outlook. Cloud-based calendars continue to sync just fine!

- As cloud services go, iCloud and Exchange offer more calendar syncing features than Google Calendar (including support for push sync, tasks, and attachments) and superior compatibility with OS X and iOS devices. So, if you have the choice, go with iCloud or Exchange—and between the two, iCloud is the better choice for those who use Apple products exclusively. However...
- While iCloud works better with Macs and iOS devices than Google Calendar does, the opposite is true for Android devices.
- Exchange is best for syncing and sharing with Windows Outlook users in an enterprise setting.
- Whichever cloud provider you choose, you'll have the best results by far if everyone in your family or organization uses the same one.
- Similarly, even though both BusyCal and the OS X Calendar app can connect to any calendar server, because BusyCal has features not found in the Calendar app, you'll have better results using BusyCal on all the Macs that are connecting to the same calendar server rather than mixing the Calendar app and BusyCal.

Note: As long as you stick with cloud-based calendars, it's no problem to switch back and forth between BusyCal and Apple's Calendar app.

In the remainder of the book, I help you answer the following additional questions:

- Should I use iCloud, Google Calendar, or Office 365? See [Learn about the Major Calendar Server Providers](#).
- How do I go about syncing my Mac and iOS calendar apps to whichever cloud service(s) I've chosen? See [Connect to a Cloud-based Calendar Server](#).
- I want other people to be able to use one or more of my calendars. Should I be sharing them or syncing them? What's the difference? See [Learn How Calendar Sharing Works](#).
- I've decided that sharing is what I need to do. How do I do that with iCloud, Google Calendar, and Office 365? See [Share iCloud Calendars](#), [Share Google Calendars](#), and [Share Office 365 \(Exchange\) Calendars](#).
- What about those public calendars I've always subscribed to, such as those with movie release dates or national holidays? See the sidebar [Public Calendar Subscriptions](#).
- Should I use LAN sharing? If so, how? See [Share Calendars over a Local Network](#).
- If I need to schedule meetings and manage attendees, what special considerations should I keep in mind? See [Manage Meetings](#).

Sync Calendars with the Cloud

Whether you use iCloud, Google Calendar, Exchange, or another cloud-based service, the cloud can serve as a central repository for your calendar data that all your devices can connect to. Syncing calendars to the cloud offers many advantages, but each service has certain idiosyncrasies you must contend with. In this chapter, I explain the key features of major calendar services, how they differ from each other, and how to connect to them from a Mac (using BusyCal or Apple’s Calendar app) and an iOS device.

Before I go any further, I want to clarify that when I say “syncing” here, I’m talking about syncing *your own calendars* between the cloud and one or more Macs and iOS devices that you personally use. If you want other people to be able to see what’s on your calendar or you want to see what’s on theirs, those topics are covered in the following two chapters, [Share Calendars with Other People](#) and [Share Calendars over a Local Network](#).

Learn about the Major Calendar Server Providers

It’s not my purpose in this book to get into the minutiae of protocols and standards, but since you’ll be using Apple’s Calendar app or BusyCal to connect to one or more calendar servers, a few quick words about CalDAV and Exchange are in order before moving on to particular providers.

About CalDAV and Exchange

The CalDAV standard specifies a way for clients and servers to implement calendar services that should provide complete interoperability. However, as with so many things in the computing world, the devil is in the details. For one thing, although CalDAV first saw the light of day in 2003 and was formalized as a standard in 2007, not every implementation of CalDAV is complete or up to date.

In addition, the standard continues to evolve, as various groups work together to extend and enhance CalDAV. In June 2012, Scheduling Extensions to CalDAV achieved “RFC” (request for comments) status from the Internet Engineering Task Force, which essentially means the manner in which meetings should be handled in CalDAV has graduated from “strong suggestion” to “requirement.”

Why should any of this matter to you? Well, one might assume that since CalDAV is a well-defined standard, whatever is true for one CalDAV server or client is true for all of them. Alas, no such luck. In particular, Apple’s implementation of CalDAV differs from Google’s implementation, and both differ from what you’ll get in any of numerous other CalDAV servers (such as Yahoo Calendar and Fruux). As a result, things that work with one provider won’t necessarily work with another.

Furthermore, BusyCal takes advantage of several CalDAV features that iCloud supports behind the scenes, but which Apple’s own Calendar apps haven’t implemented. The result is that a piece of data that syncs brilliantly between iCloud and several Macs running BusyCal may not show up at all in the Calendar app, or may even be deleted if you modify an event in the Calendar app that you created in BusyCal. (I say more about this ahead, in the [iCloud](#) discussion.)

Microsoft’s Exchange Server handles not only calendars but also contacts and email. It’s been around since 1993, and since Microsoft made all the decisions about its capabilities, it evolved more quickly than CalDAV. However, that’s a mixed blessing. Numerous versions of Exchange Server are in widespread use, and not all of them have the same features. For example, Exchange Server 2010 and 2013 support push notifications, but Exchange Server 2007 doesn’t. Unfortunately, it’s often difficult for ordinary users to tell which version of Exchange Server they’re connecting to. Furthermore, several third-party calendar providers use their own implementations of Microsoft’s Exchange protocols, which introduce still more variables.

Of the many CalDAV and Exchange calendar server providers, however, a few major players stand out, especially for Mac users. Here are some facts you should know about them.

iCloud

Apple's free iCloud service (<http://www.apple.com/icloud>) offers push synchronization of calendars (including tasks), contacts, notes, and Safari bookmarks; an email account; document syncing for selected OS X and iOS apps; and a variety of other useful features. You can access most of your data, including your calendars, in a Web browser, or using client software included with every Mac and iOS device (as well as with BusyCal and other third-party apps).

Tip: If you want to learn all the ins and outs of iCloud, allow me to recommend my book *Take Control of iCloud*.

iCloud uses a fairly modern and complete implementation of CalDAV, and is constantly being updated and improved to support the latest standards (unlike Google Calendar). BusyCal is optimized for use with iCloud, as it supports syncing both events and tasks, as well as other data types unique to BusyCal, such as graphics and tags.

Unlike Google Apps, iCloud offers no way for you to use its services with your own domain name. One implication of this is that if you're using iCloud for your calendars and you send out meeting invitations, they may not come from your preferred business email address. (See [Where Meeting Invitations Come From](#) for more about this confusing situation.)

In iCloud (as well as in OS X 10.8 or later and iOS), calendars and task lists are treated as separate entities—you use the Calendar app on your Mac, iOS device, or the iCloud Web site, to view and edit events, while using a different app, Reminders, to manage your tasks. (You can read Apple's description of this bifurcation at <http://support.apple.com/kb/HT4969>.) BusyCal, on the other hand, shows you both events and tasks (or to do items) in the same window, which was also the case in iCal (as the Calendar app was called prior to Mountain Lion).

Note: Some calendar servers still combine events and tasks on the same calendar, but the trend is shifting toward splitting them. BusyCal is compatible with both types of calendar servers—those that combine events and tasks on the same calendar and those that require events and tasks to be stored on different calendars.

The BusyMac Web site helpfully lists other iCloud quirks (for details, read <http://www.busymac.com/tc/caldav-limitations.html>), but I'm happy to say BusyCal 2 overcomes most of the iCloud-related limitations earlier versions had. All things considered, iCloud is a fine (not to mention free) choice for hosting your calendars in the cloud.

Google Calendar

Anyone with a Google account can create, edit, and share calendars online at <http://calendar.google.com/>. Google accounts are free, and include access to a long list of other features too, including Gmail, Google Drive, Google+, and so on. Anyone who wants to use Google products with their own domain name can sign up for a Google Apps account (<http://www.google.com/enterprise/apps/business/>)—free for individuals and groups of up to ten users but also available in paid varieties with additional features for businesses and larger groups.

Google Calendar was available only via the Web at first; client access via CalDAV was a later addition. By the time that happened, Google had already made certain decisions about what could and could not be done with calendars, and those limitations are reflected in its (somewhat outdated) CalDAV implementation too. For example:

- Google lets you add tasks (a.k.a. reminders or to dos) on its Web site, but these are not accessible to clients such as Apple's Reminders app and BusyCal.
- Google Calendar doesn't support push updates over CalDAV.
- Some actions (such as creating or sharing calendars) that can be performed within BusyCal or the Calendar app for iCloud calendars require a trip to the Google Calendar Web site to accomplish for Google calendars.
- Even though there's an experimental Google Calendar Labs setting whereby you can enable attachments to events, these attachments don't sync over CalDAV, and neither BusyCal nor the Calendar app will let you attach a file to an event in a Google calendar.

Google also distinguishes between your primary calendar—the one it creates for you by default—and secondary calendars (additional calendars you create yourself).

Secondary calendars have certain restrictions:

- Although BusyCal can display both primary and secondary calendars without any extra steps, the Calendar app in OS X requires a visit to the Delegation view of the Accounts preference pane (see [Work with Delegation](#), ahead).
- To add secondary calendars to the Calendar app in iOS, you must follow an odd procedure that involves going to a special Web page *on each device* and choosing which calendars you want that device to be able to access. (For details, go to <http://support.google.com/calendar/bin/answer.py?hl=en&answer=151674> and read the information under “Sync Multiple Calendars.”)
- If you create a meeting on a secondary calendar (see [Manage Meetings](#)), the Google servers will not deliver your invitations by email; they’ll appear only on the Google Calendar Web site.

Those issues aside, Google Calendar is widely used, reliable, and arguably better suited for business applications than iCloud. (It’s also the better choice for people who use neither OS X nor iOS, but I assume most readers of this book have a Mac or iOS device.)

Office 365

Microsoft Office 365 is a subscription-based online suite that offers users access to a variety of cloud-based services. There are currently seven different Office 365 plans to choose from, each with its own combination of features. For the purposes of this book, we’re concerned only with the business plans, all of which include access to an Exchange server (for calendar, contacts, and email) via a Web browser or clients such as BusyCal or Outlook. See <http://office.microsoft.com/business/>.

Although Office 365 uses Exchange behind the scenes, BusyCal offers a distinct Office 365 account type to simplify setup, so you need not concern yourself with some of the details that other (especially older) Exchange servers require.

Other Calendar Servers

Because iCloud and Google Calendar are the dominant CalDAV services for Mac users, those are the ones I pay the most attention to in this book. However, in theory—and leaving aside any weird implementation details that could affect compatibility—both BusyCal

and Apple's Calendar app should be able to connect to pretty much any CalDAV server, of which there are many other choices.

If you're looking for a cloud-based service for calendar syncing (plus contacts, perhaps), you might consider a provider such as Fruux (<https://fruux.com/>, currently free but with paid accounts planned for the future) or Yahoo Calendar (<http://calendar.yahoo.com/>, free). But such services are just the beginning.

You can find a fairly long (but not exhaustive or entirely up to date) list of CalDAV server implementations at <http://caldav.calconnect.org/implementations/servers.html>. The list includes both commercial and open-source software, and these servers are, in turn, used by a great many businesses and online calendar providers. For example, if you sign up for a business account with MacServ (<http://macserv.com/>), you'll find yourself using the Kerio Connect server, which includes not only CalDAV but also contacts and email.

Although I don't recommend it, you could—if you were so inclined and of a suitably geeky disposition—install one of these server apps on a Mac of your own, to provide CalDAV services to computers on your local network and on the Internet. If that idea tempts you, the easiest way to run a CalDAV server is to buy OS X Server, a \$19.99 add-on to OS X. Among many other features, it includes Calendar Server (formerly called iCal Server), which is yet another implementation of CalDAV. But be warned: running your own CalDAV server is not a trivial undertaking, and in almost every case you'll be much happier using a free or paid CalDAV server run by someone else.

Likewise, Office 365 is just one of many Exchange server providers. If you'd like to use Exchange but not Office 365, try a Web search for "hosted Exchange provider." You'll find options such as Intermedia (<http://www.intermedia.net/>), Mail2Web (<http://mail2web.com/business-email/>), Rackspace (<http://www.rackspace.com/email-hosting/hosted-exchange/>), and hundreds of others. You can also install your own Exchange Server if you have a suitable hardware and network setup (Exchange Server runs only on Windows), but it's expensive and nontrivial to set up and manage.

Connect to a Cloud-based Calendar Server

Once you know which service you want to use, connecting requires little more than entering your username and password, and in some cases a server address. Since the process is largely self-explanatory, I provide just an overview here, with links to where you can learn more.

Note: Since the iOS Calendar app uses a much different approach, I mention it separately ahead—see [Connect to a Cloud-based Server with the iOS Calendar App](#).

Connect to a Cloud-based Server from BusyCal

On a Mac running BusyCal 2, you'll most likely find that any cloud-based accounts you previously configured (either in the Mail, Contacts & Calendars pane of System Preferences or in an earlier version of BusyCal) are set up automatically, and at most require you to reenter your password.

However, if you need to set up a new account, do the following:

1. In BusyCal, choose BusyCal > Preferences and click Accounts.
2. Click the plus  button at the bottom.
3. In the dialog that appears, enter your username (which is usually your email address) and password, choose the type of server (such as iCloud, Google, or Exchange) from the Server Type pop-up menu, and click OK.
4. In BusyCal's Accounts preference pane, you can optionally change any of the default settings, which vary somewhat by the type of server you're connecting to. The one you're most likely to change is the Refresh Calendars setting, which specifies how often BusyCal checks for updates (Push is an option on this menu only for servers that support push updates.)

Tip: Because scheduled updates are necessary only for incoming changes, not for updating the server with changes you make locally, a refresh rate of every 15 minutes is nearly always sufficient.

5. Close the Preferences window. Then, in BusyCal's main window, look in the sidebar for the newly added account. Check or uncheck each calendar in the account (of which there may be one or several) to show or hide it.
6. Right-click (or Control-click) the calendar name in the sidebar to display a pop-up menu with additional options, such as a Get Info command (for changing the name and various other settings) and a Color submenu (for changing the color of calendar entries).

To learn about the many other ways you can customize calendars in BusyCal, refer to the BusyCal help at <http://www.busymac.com/help/>.

Connect to a Cloud-based Server with the iOS Calendar App

There's no BusyCal app for iOS, but that's no problem—you can use the built-in Calendar and Reminders apps on your iOS device to connect to all the cloud-based calendars you access on your Mac with BusyCal.

All accounts are handled centrally in the Settings app. Tap Settings > Mail, Contacts, Calendars; then, tap Add Account, tap an account type, and enter your credentials. The exact steps depend on the type of account you're using. For specific instructions on connecting an iOS device to iCloud, Google Calendar, or Exchange, see <http://www.busymac.com/tc/ios.html>.

Share Calendars with Other People

Sharing a calendar from iCloud, Google Calendar, or Exchange enables a family member, friend, or colleague to see everything on the calendar—and optionally gives them the power to make additions, changes, or deletions.

In this chapter, I explain the ins and outs of calendar sharing—how it works and how to share your calendars from BusyCal, the iCloud Web site, the Google Calendar Web site, or the Office 365 Web site.

I also briefly discuss *delegation*, and why you might need to know about this slightly different approach to calendar sharing. And I've included a sidebar about publishing and subscribing to read-only public calendars (such as holidays and sporting events).

Learn How Calendar Sharing Works

At the risk of repeating the obvious, *syncing*—covered in the previous chapter, [Sync Calendars with the Cloud](#)—is what you do to ensure that your own cloud-based calendars are the same on all your own personal devices. *Sharing*, on the other hand, is what you do to enable other people to see (and, if you wish, edit) those calendars; I cover that in this chapter for syncing via the cloud, and in the next chapter ([Sync Calendars over a Local Network](#)) for syncing on a local network. Any given calendar can be both synced and shared.

Because cloud-based calendars live on a server, you must, by definition, sync them if you want to use them in an app like BusyCal or Apple's Calendar—by setting up the calendar account on your Mac or iOS device, you're instructing the device to sync with the online calendar. Sharing is an optional extra step.

Meet and share: *Meetings are another form of sharing; when you invite people to a meeting (see [Manage Meetings](#), two chapters ahead), you are in effect sharing just one event from your calendar with them. Your calendar need not be shared in order to invite someone to a meeting. And, even if you have shared a calendar with someone, you might want to invite them to a meeting that's already on your calendar—the fact that you have an event scheduled for such-and-such a time doesn't necessarily imply that they should attend!*

Basically, if you want someone to be able to see *everything* on your cloud-based calendar—whether or not you also want them to have write access or attend your meetings—you want to share your calendar.

You can share an iCloud or Exchange calendar (including Office 365) from within BusyCal or Apple's Calendar app; to share a Google calendar, you must make a trip to the Google Calendar Web site. (For other CalDAV calendars, the way sharing works depends on the server; see [Work with Delegation](#) for more information.) Regardless of where you set up sharing, the server—not your calendar app—is responsible for making it available to other people. Even if all your Macs and iOS devices are turned off, your calendars remain available to everyone you've shared them with, and they can all sync the shared calendars with all of their Macs and iOS devices.

You have two main choices to make when sharing calendars:

- **Public or private?** A public calendar is one anyone in the world can connect to—as long as they know the calendar's address. Public calendars are always read-only.

Sharing an iCloud or Exchange calendar publicly doesn't add the calendar to a public list or directory that someone might stumble across; it simply results in the creation of a URL on a server somewhere that anyone who knows it can enter into their own calendar client—it's still semi-private in the sense that it's protected by obscurity.

However, the same is not true of Google calendars you share publicly; by default Google includes such calendars in public Web and Calendar search results. (You can opt to keep calendar details private and reveal only your free/busy availability, but that mostly defeats the purpose of sharing a calendar.) For some interesting

background information on public calendar sharing, read the sidebar [Public Calendar Subscriptions](#), ahead.

A private calendar is available only to the specific people you invite, and you can give each person read-only or read-write access. To access your private calendar, someone must log in to their (iCloud or Google) account using the email address you entered when sharing the calendar with them.

In and out: *You can share a calendar as both public and private, thus giving some people read-write access (see the next point) while enabling anyone to view the events.*

- **Read-only or read-write?** You can optionally give write access to any or all of the people you share a calendar with privately; when you do, they can add, modify, and delete events—and optionally, in the case of Google Calendar, change the set of people with whom it's shared. About the only thing they can't do is delete the calendar. Exchange calendars offer three levels of access: in addition to read-write (Editor) and read-only (Reviewer) roles, there's a Contributor role, which means the person can create and read events, but can't edit or delete existing events.

When you share a calendar, nothing changes for you as the calendar's owner—the only difference you may notice is a small  icon next to the calendar's name in BusyCal or the Calendar app indicating that it's shared. Sharing doesn't affect syncing, although you may (depending on your settings) see notifications when other people make changes to your calendar. Similarly, if you connect to a calendar someone else has shared with you, it behaves in every way like a calendar of your own (including syncing to any and all devices on which you've set up the relevant account)—the only difference is a read-only  icon in BusyCal if the person sharing the calendar hasn't given you write access.

With that background out of the way, I want to say a few words about the specific features and limitations of calendar sharing in iCloud, Google Calendar, and Office 365 and provide a brief outline of how to share calendars in each service.

Share iCloud Calendars

Sharing calendars in iCloud is considerably easier than sharing them with Google Calendar or any other CalDAV server. The process is particularly smooth and seamless if the people you're sharing with use 10.8 Mountain Lion or later on a Mac, or iOS 5 or later on an iOS device. However, you should be aware of two limitations:

- Although anyone can connect to a publicly shared iCloud calendar, the people with whom you share your calendars privately must have an iCloud account. If you share a calendar privately with someone who doesn't have an iCloud account, they'll be invited to set one up, after which they can connect to your calendar.
- Regular calendars can be shared either publicly or privately, but task (reminder) lists can be shared only privately.

You can share iCloud calendars in the following ways:

- **From within BusyCal:** Double-click a calendar name in the sidebar (or select it and choose Edit > Get Info). Then check the Share Calendar box and set the options you want to use (**Figure 1**). For full instructions, see <http://www.busymac.com/tc/caldav-sharing.html>.
- **From within Calendar:** In Calendar on a Mac, select a calendar, choose Edit > Sharing Settings, and follow the prompts; for more detail, see <http://support.apple.com/kb/PH11552>. In Calendar on an iOS device, tap the Calendars button, tap the blue arrow  button next to the name of the calendar you want to share, tap Add Person, and follow the prompts.

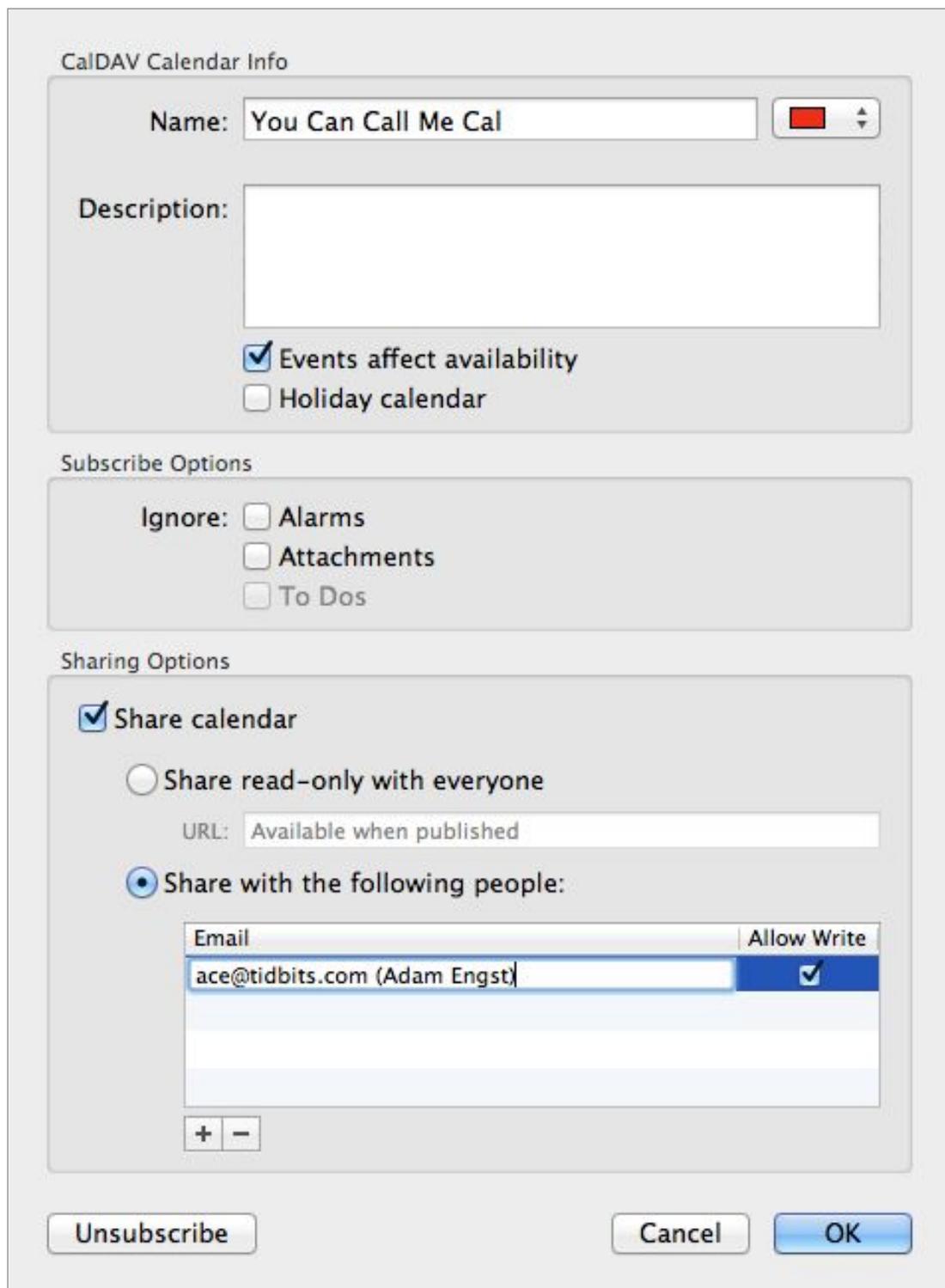


Figure 1: Share iCloud calendars within BusyCal here.

- **From the iCloud Web site:** Log in to your account on icloud.com, click the Calendar app, click the sharing  icon next to a calendar, and follow the prompts (**Figure 2**). For details, see <http://support.apple.com/kb/PH2690>.

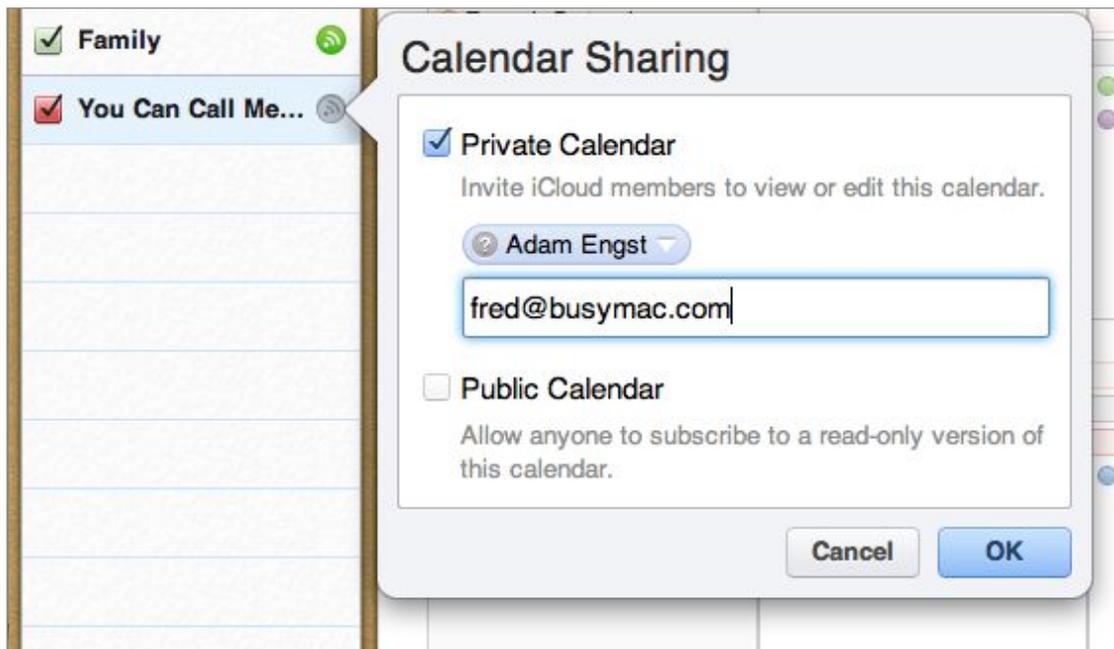


Figure 2: This popover shows controls for sharing a calendar from the iCloud Web site.

When you share a calendar publicly, you get a URL that you can post or send directly to anyone you want to be able to view the calendar. When you share a calendar privately, those with whom you've shared it receive an email message with the instructions for subscribing—generally a simple matter of clicking a single link. Both BusyCal and the Calendar app also display an Inbox  icon in the toolbar that shows updates to shared calendars and other notifications.

Share Google Calendars

Google calendars have more sharing options than iCloud calendars. For example, when sharing a calendar privately, you're not limited to offering read-only or read-write access. You have four choices: See Only Free/Busy; See All Event Details (equivalent to read-only access); Make Changes to Events (equivalent to read-write access); and Make Changes AND Manage Sharing. And if you have a Google Apps account, when sharing a calendar publicly, you can check a box to give everyone in your organization access to it at once.

On the other hand, there's no way to share Google calendars or adjust sharing settings from within BusyCal or the Calendar app; you must log in to your account on the Google site and make any desired changes there. And, as with iCloud, although anyone can load a publicly shared

calendar without needing an account, anyone who wants to access your privately shared calendar must have a Google account.

To share a Google calendar, log in at <http://calendar.google.com/>, click the menu  button next to a calendar name, and choose Share This Calendar from the pop-up menu (**Figure 3**).

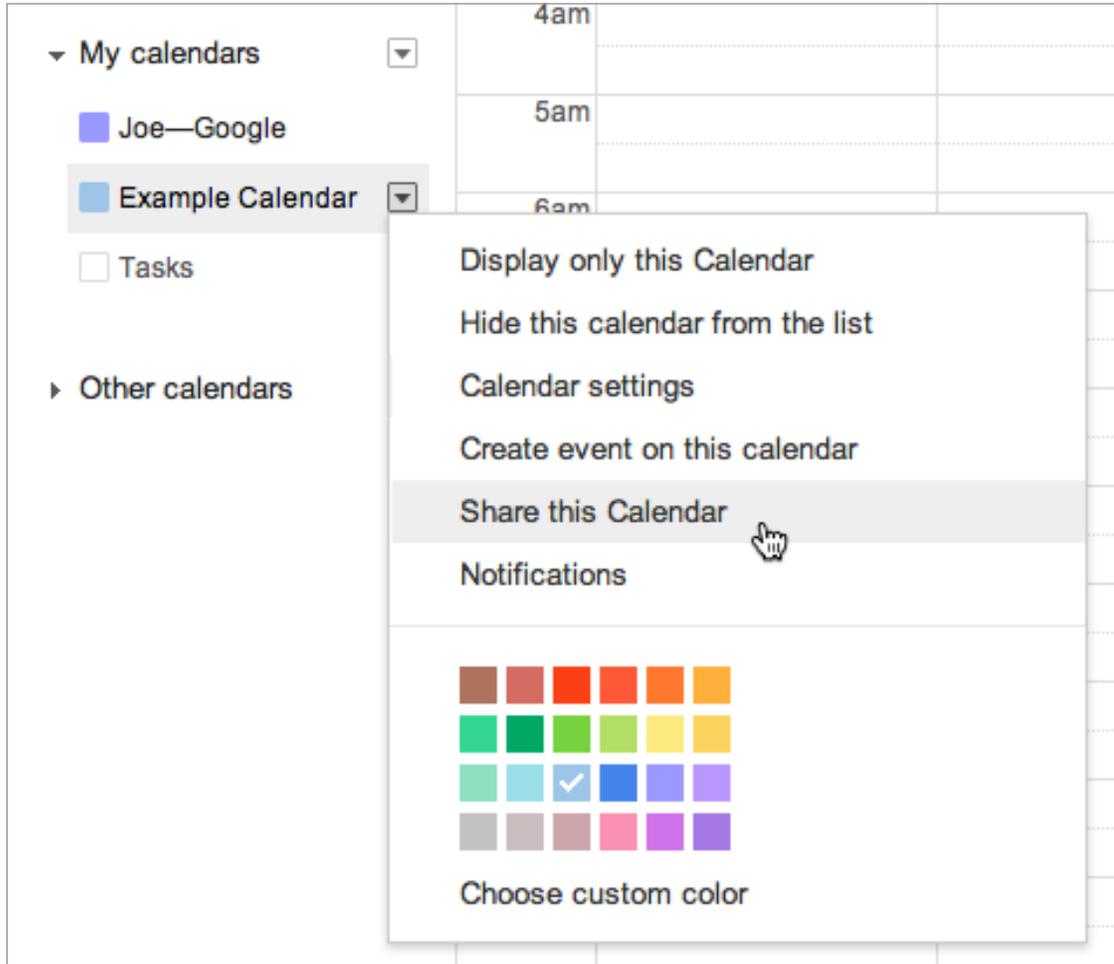


Figure 3: Choose this command to display the settings page for sharing your Google calendar.

Then do the following:

- To share the calendar publicly, select Make This Calendar Public, click Save, and click Yes to confirm.
- To share the calendar privately, enter an email address in the Person column, choose the permissions you want to grant that person, and click Add Person. Then click Save. For more info, see <http://support.google.com/calendar/bin/answer.py?hl=en&answer=37082>.

As with iCloud calendars, when you share a calendar publicly, you get a URL that you can circulate as you wish. (To see the calendar's address, click the menu ▾ button next to the calendar's name and choose Calendar Settings from the pop-up menu. Then click the green ICAL button in the Calendar Address section near the bottom of the page, as shown in **Figure 4**.) When you share a calendar privately, it appears automatically in the other users' Google Calendar lists; everyone with whom you've shared it also receives an email message containing a link they can click to connect to the calendar.

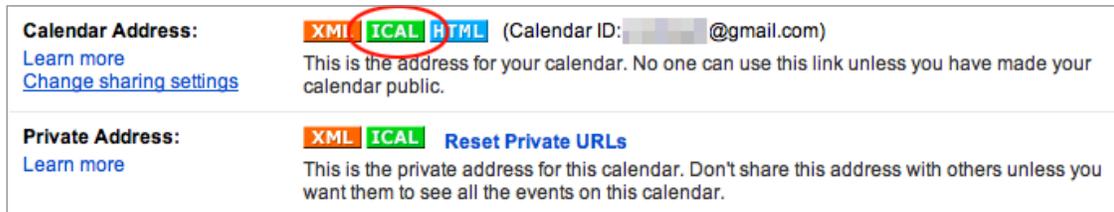


Figure 4: Click the ICAL button circled above to display the public address for a shared Google calendar in iCalendar format.

Share Office 365 (Exchange) Calendars

Sharing Office 365 calendars is much like sharing iCloud calendars (at least within BusyCal). As I mentioned in [Learn How Calendar Sharing Works](#), one difference is that you have not only Read Only and Read & Write privileges to choose from, but also Read & Create (which prevents the user from editing or deleting events).

Tip: Since Office 365 uses Exchange for calendars, all these instructions, with the exception of the final bullet point, apply to other Exchange servers as well.

You can share Office 365 calendars in the following ways:

- **From within BusyCal:** Double-click a calendar name in the sidebar (or select it and choose Edit > Get Info) to display the dialog shown in **Figure 5**.

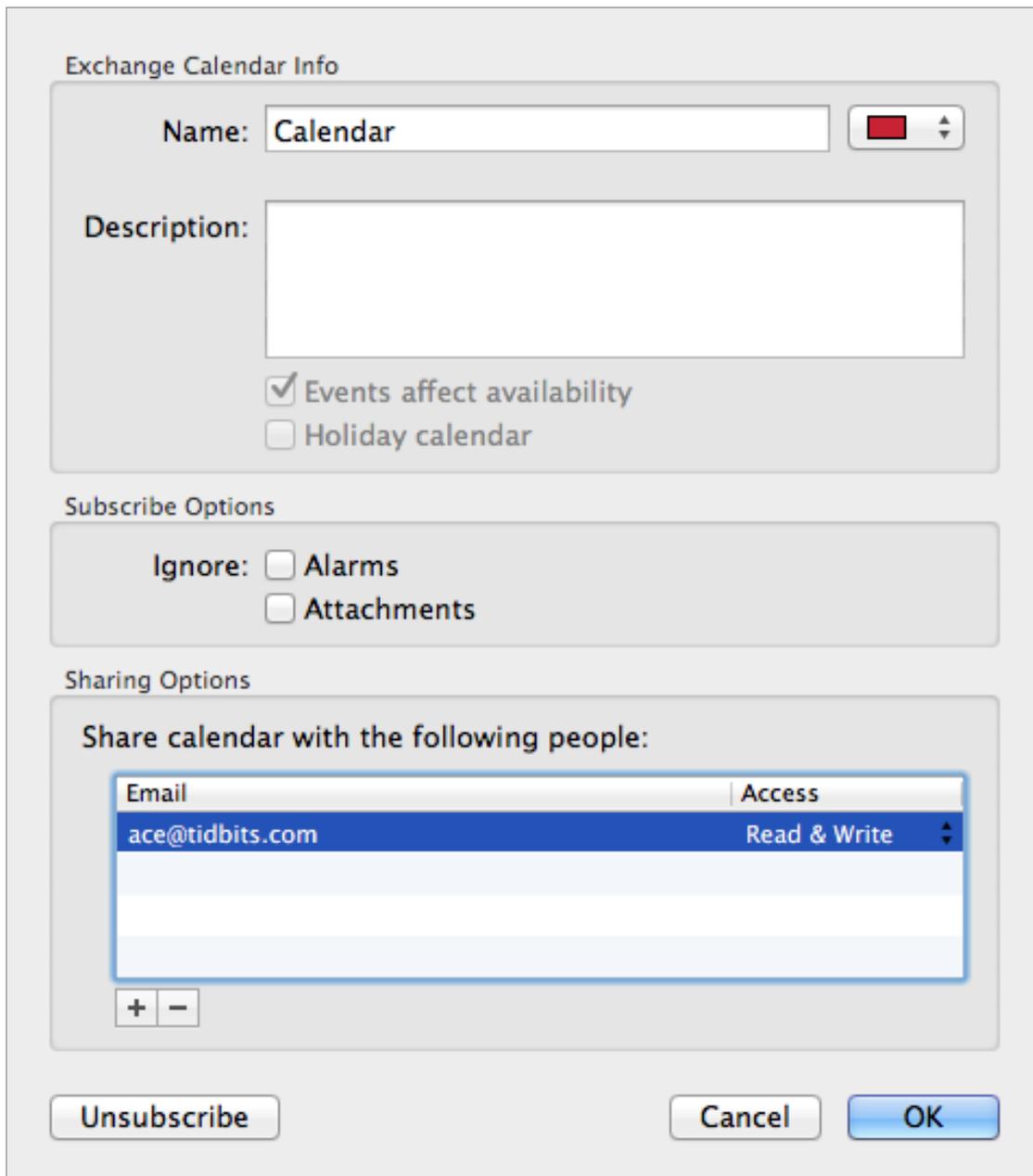


Figure 5: Share Exchange calendars within BusyCal here.

Then, in the Sharing Options section, click the plus button, enter another person's email address, and choose the desired level of access from the Access pop-up menu:

- ▶ **Availability:** User can view your Free/Busy time in the Availability Panel (see [Schedule a Meeting with Exchange](#)) but can't view the details of the events. This option is available only for your primary calendar.

- ▶ **Availability, Title, Location:** User can view your event titles and locations in the Availability Viewer. This option is available only for your primary calendar.
- ▶ **Read Only:** User can view existing events but can't create or edit events.
- ▶ **Read & Create:** User can view existing events and create new events, but can't edit existing events.
- ▶ **Read & Write:** User can view and edit existing events and create new events.
- ▶ **Delegate:** Same as Read & Write, plus user can create and respond to email meeting requests on your behalf. (See [Work with Delegation](#) for further details.)

For full instructions, see <https://support.busymac.com/help/25995-sharing-calendars-with-others-through-exchange>.

- **From within Calendar:** In Calendar on a Mac, you can share an entire Exchange calendar *account* but not an individual calendar; for details, see <http://support.apple.com/kb/PH11547>. (Calendar on an iOS device offers no way to share an Exchange calendar.)
- **From the Office 365 Web site:** To share a calendar privately, log in to your account on at <https://outlook.office365.com/> and click Calendar. Then right-click (or Control-click) a calendar in the sidebar and choose Share Calendar from the contextual menu to display the sharing controls (**Figure 6**). Enter one or more email addresses in the Share With field and press Tab. For each person, choose the desired level of access. (For more on the Delegate option, available only to those within your organization, see [Work with Delegation](#), ahead.) Click Send. Read <http://office.microsoft.com/client/15/help/preview?AssetId=HA103842904> for further details.

To share a calendar publicly, right-click (or Control-click) the calendar name and choose Permissions from the contextual menu. Choose the level of detail you want to publish from the pop-up menu in the Public Calendar section. Then right-click the Subscribe to Calendar link to copy the link to the calendar's .ics file (see the sidebar [Public Calendar Subscriptions](#), next), which you can then share with other people.

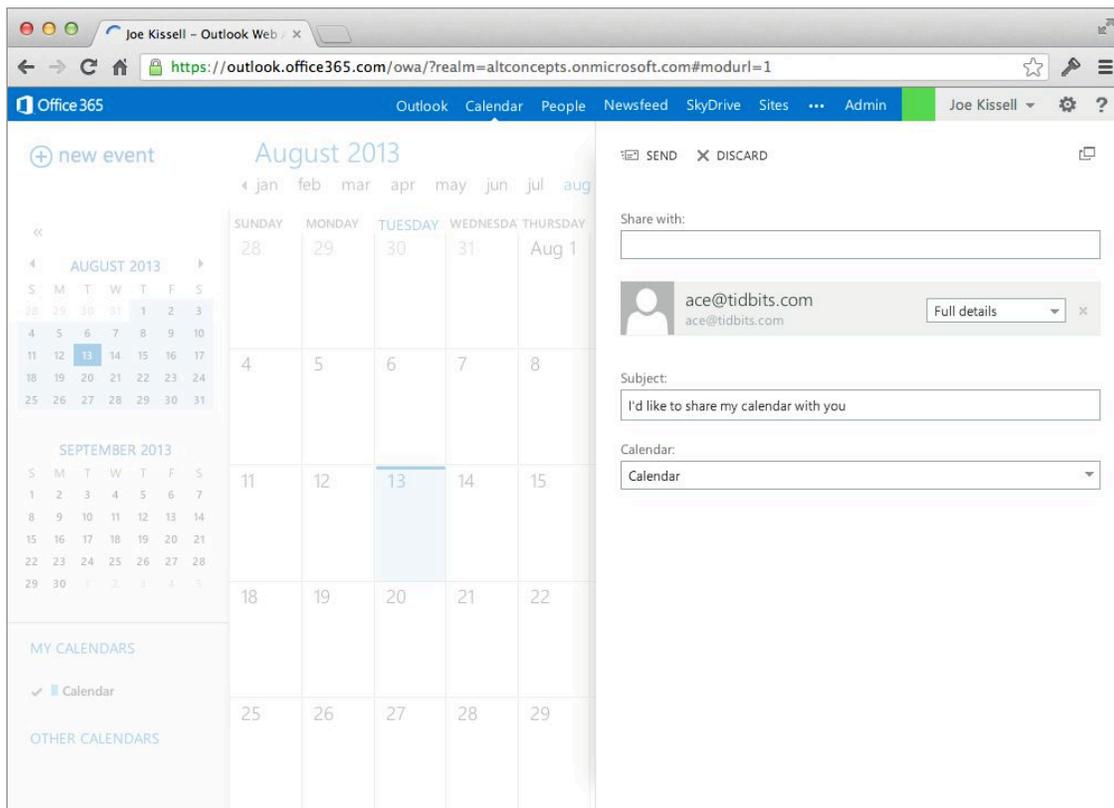


Figure 6: You can share calendars on the Office 365 Web site.

Public Calendar Subscriptions

When you share a calendar publicly (with iCloud, Google Calendar, or Office 365), you create a file in iCalendar (.ics) format that contains all your calendar data; the file is then published in a read-only form via WebDAV at a URL that the server supplies to you. (This is a bit different from privately shared calendars, in which each person viewing the calendar uses the more interactive CalDAV protocol.) People who want to view the calendar then subscribe to it in their calendar client. (Exchange servers support a similar feature, but restricted to users within your organization; see [Subscribe to Exchange Public Calendars](#), ahead.)

In BusyCal, you subscribe to a public calendar by choosing File > New Calendar Subscription and filling in the calendar's URL (and, sometimes, other details) in the dialog that appears.

Apple, Google, Yahoo, and other calendar providers host public calendars of general interest, such as holidays, sports schedules, and movie releases. You can find a list of popular public calendars at <http://www.busymac.com/webdav.html>, and over 4,000 user-maintained calendars at <http://icalshare.com/calendars>.

Work with Delegation

Most CalDAV servers, as well as Exchange servers (but not iCloud), use the term *delegation* to refer to calendar sharing in which you grant others the power to make changes to your calendar. The people who have such access are called delegates (think of the busy executive delegating her schedule to her secretary). Other than the fact that “delegation” sounds more complicated and business-y than “sharing,” it’s more or less the same thing—delegation is simply an older model for sharing calendars.

If you’re syncing with a CalDAV server that uses delegation for sharing and you want to grant someone (a delegate) access to your calendars, do the following:

1. In BusyCal, choose BusyCal > Preferences and click Accounts.
2. Select the CalDAV server, click Delegation, and then click the Edit button.
3. Click the plus button. Enter the name of another user who’s connected to the same CalDAV server, and then select the checkbox if you want to grant them write access to the calendar. Click OK; repeat this step to add more delegates.

For Exchange servers, BusyCal lets you share calendars with a delegate (see [Share Office 365 \(Exchange\) Calendars](#)) and add calendars for which someone else has delegated access to you. To add a delegated calendar:

1. In BusyCal, choose BusyCal > Preferences and click Accounts.
2. Select the Exchange server and click Sharing.
3. Click the plus button. Enter the name of the user who’s delegating access to you (this user must be connected to the same Exchange server).

The delegated calendars appear in BusyCal’s sidebar.

All or nothing: *When you make someone a delegate, that person has access to all the calendars in your account on that server. By contrast, under the sharing model that iCloud, Google Calendar, and Exchange use, you can restrict access to individual calendars.*

Subscribe to Exchange Public Calendars

Exchange supports public calendars, created by your network administrator, that can be shared with all users in an organization.

To subscribe to a public calendar:

1. Choose BusyCal > Preferences > Accounts, select your Exchange Account in the list on the left, click Sharing, then click the Public Calendars button.
2. In the browser that appears, navigate to the public folder containing the public calendar you want to subscribe to. Select the calendar and click Subscribe.

The public calendar will appear in the left sidebar. To unsubscribe from a public calendar, right-click (or Control-click) on it in the left sidebar and choose Unsubscribe.

Share Calendars over a Local Network

Despite the many advantages of syncing your calendars with a cloud-based service and then sharing them (if you wish) with specific people, there are cases in which you might want to cut the cloud out of the mix entirely and share calendar data directly with other computers over your local network. In this situation, the word “sharing” has a somewhat different sense; it’s more a matter of publishing and subscribing.

Although I’ll try in this chapter to convince you that local-area network (LAN) sharing is seldom the best idea, BusyCal does it extremely well, and using this capability may enable you to solve certain problems with a minimum of fuss.

Understand the Limitations of LAN Sharing

LAN sharing in BusyCal is largely a remnant of the days before services such as iCloud and Google offered free cloud-based calendar syncing. Although MobileMe offered a way to sync one’s own calendars among several Macs, there weren’t any great options for sharing calendars among different users on the same network. BusyCal’s predecessor, BusySync, filled that need admirably, and BusyCal inherited the same capability. My wife and I used this capability successfully for years to share each other’s calendars, which we then synced independently to our (pre-iPhone) mobile devices.

Hello, Bonjour! BusyCal’s LAN sharing uses an OS X technology called Bonjour, which is a type of zero-configuration networking. That means computers on your network can see each other and figure out what network services are available without your having to know any Mac’s network address or enter any settings.

LAN sharing in BusyCal still works as well as it ever did—in fact, better than ever—but it solves a problem most people no longer have, since sharing cloud-based calendars is now free, easy, and ubiquitous.

Furthermore, compared to sharing cloud-based calendars, LAN sharing has several important limitations:

- In LAN sharing, your local Mac—not a server somewhere—holds the master copy of your calendar. That in itself isn't a disadvantage, but in BusyCal 2, that local calendar doesn't connect to *anything* except other copies of BusyCal. It doesn't sync with third-party apps on your Mac (such as Microsoft Entourage or Outlook), and crucially, it doesn't sync with Apple's Calendar app either.
- That, in turn, means *you cannot sync your local calendars (or calendars others have shared with you over the LAN) with your iOS devices*. At all. Nor can you republish your local or LAN-shared calendars to the cloud (or vice-versa); see the sidebar [Farewell to Republishing](#).
- You can optionally set a password for read-only access, read-write access, or both—but these passwords apply to everyone who connects to the calendar. You don't have the user-level control over permissions that you do when sharing cloud-based servers.
- Everyone else who accesses your calendars via LAN sharing must be using BusyCal on a Mac—other clients and platforms are right out.
- Calendars stay in sync only when devices are connected to your network; if someone takes a laptop out of the building, for example, calendar changes won't show up until the device reappears on your network. (Depending on your network hardware and configuration, it may be possible to enable remote access, but you must make your Mac publicly accessible over the Internet; you'll also require knowledge of port forwarding and other advanced router configuration settings.)

And that, in a nutshell, is why LAN sharing probably is not for you.

However, you might be an exception to this rule! One advantage LAN sharing has over sharing cloud-based calendars is that you control all your own data. If your calendars contain sensitive information, you need never worry that they're in the hands of some big corporation that could suffer a security breach, network outage, or goodness knows what else. Your data is as secure as your network, and you can take whatever steps you like—firewalls, VPNs, whatever—to ensure that no one outside your network can see your calendars, even by accident.

And, let's not forget that many Mac users don't have any iOS devices and seldom if ever move their Macs. If your family or business needs access to shared calendars only on Macs running BusyCal and only when connected to your network, LAN sharing is a great idea because it's simple to set up and it avoids having to mess with iCloud or Google accounts.

Set Up LAN Sharing with BusyCal

As I mentioned earlier, LAN sharing with BusyCal is different from both cloud syncing and sharing of cloud-based calendars; it's sort of a hybrid of the two. You begin with a local ("On My Mac") calendar that you publish with a few clicks, making it available to other copies of BusyCal on your network. Then, in the other copies of BusyCal, you subscribe to the published calendar—which consists merely of checking a box and (if applicable) entering a password.

For complete instructions on publishing BusyCal calendars over a LAN and subscribing to them, see <http://www.busymac.com/tc/busycal-lan.html>.

Manage Meetings

If you're organizing a meeting, simply popping an event on a calendar—even one that's shared with the people you're inviting—may not be enough. You may want to invite other participants, track whether they've accepted or declined, and have a means of sending out updates or cancellations automatically if the event data changes. All that is part of what CalDAV and Exchange offer, and therefore it's available to you in BusyCal and Apple's Calendar app.

Unfortunately, when it comes to calendar apps and services, meetings turn out to be surprisingly tricky because they involve many variables, of which any participant can control only a few. As a result, problems like missing invitations, missing responses, and invitations sent from the wrong account are all too common. In this chapter, I explain why meetings are such a challenge for calendar apps, how they're *supposed* to work, and how to increase the chances that they *will* work that way for you!

Understand How Meetings Are Supposed to Work (and Why They Often Don't)

When it comes to scheduling meetings within an organization, Exchange offers a darn good experience. The meeting organizer can see everyone's availability in advance and can count on meeting invitations and responses being sent and received. In general, for both organizers and attendees, meeting scheduling just works. Although this seamless operation used to require that everyone use Outlook, BusyCal 2.5's Exchange support includes viewing availability, making BusyCal an equally good calendar client.

But Microsoft Exchange Server is expensive, uses proprietary protocols, requires considerable expertise to manage, and doesn't run on OS X. So most people and organizations that use Macs gravitate toward less-expensive options that use open standards such as CalDAV. Unfortunately, the freedom for each person to use different clients (or even different calendar servers) also has the consequence of introducing many variables that could cause problems.

If you and everyone who will be attending your meetings use BusyCal, and you all connect to the same (iCloud, Google Calendar, Office 365, Exchange, or CalDAV) server, your experience can be smooth too. However, if you don't know and can't control what software and services the other participants are using, all bets are off. Differing calendar clients, email clients, and software settings can disrupt meeting invitations and responses. And, when participants use different calendar servers, there's no guarantee they'll all see the same thing.

With that disclaimer aside, let me describe how meeting scheduling *should* work. I'll give two examples. Both assume everyone involved uses BusyCal, but the first illustrates how scheduling should work when all participants use iCloud and the second illustrates the same thing with Exchange (although the process is similar for users of Google Calendar and other CalDAV calendars).

Schedule a Meeting with iCloud

To organize a meeting, you start by creating an ordinary event on one of your iCloud calendars in BusyCal. Then you enter the email addresses for one or more people you want to invite in the Attendees field, and click Send Invitation.

If an invitee has an iCloud address (ending in @icloud.com, @me.com, or @mac.com)—and uses the default iCloud setting to receive in-app notifications (see <https://support.busymac.com/help/11000-meetings#icloud>)—the invitation will be delivered directly to her BusyCal or Calendar inbox, from where she can respond with “Accept,” “Decline,” or “Maybe.” However, if a recipient has a non-iCloud address or has opted to receive invitations by email, the calendar server sends that person an email message containing details of the invite and buttons for “Accept,” “Decline,” and “Maybe. (It's in this email process that things most often go out of whack.) In any case, when the recipient responds, you as the meeting organizer (as well as any other attendees) can see an icon next to that attendee's name indicating her status.

The attendee who has just replied by clicking a button in an email message is taken to a Web page with event details. If she wants to add the event to her own calendar, she clicks a link on that page to download a .ics file, which opens in BusyCal. (The same .ics file appears in the email invitation, and can be opened from there, too.)

BusyCal prompts her to choose which calendar the event should go on. Once it's in her calendar, the attendee can change her status from within BusyCal, and can also see the status of other attendees—accepted 🟢, declined 🚫, maybe 🟡, or not yet replied 🟡.

If you later modify or cancel the meeting, other participants receive an email notification. But the event on their calendars doesn't update itself automatically—as before, they must open the .ics file in BusyCal (which replaces the old event with the updated version).

Now then... what might go wrong? When and why would this process not work the way it should? Let me give you a few examples:

- Attendees might not receive their invitations. As I mentioned, invitations sent from iCloud to other iCloud addresses (that is, addresses in the icloud.com, me.com, or mac.com domains) usually arrive as they should; with other addresses, it's hit-and-miss.
- Even if attendees receive the message, they may not respond to the invitation by clicking Accept/Decline/Maybe.
- Attendees might not realize they must open the .ics file to put the meeting on their own calendars, and forget about the meeting.
- The email message containing the invitation may come from an unexpected address (see [Where Meeting Invitations Come From](#), ahead), leading to the message being incorrectly marked as spam or just ignored by the recipient.
- If an attendee adds the event to a non-iCloud calendar, meeting status changes may or may not show up correctly.

Many other things can go wrong, too. Although it's impossible to eliminate all possible problems, the point I want to reiterate is that if you can be sure all attendees use BusyCal and the same server (in this example, iCloud—but the same would be true of other calendar servers), you'll significantly reduce the likelihood of issues. That brings me (after a brief sidebar) to how scheduling should work with Exchange accounts.

Where Meeting Invitations Come From

If you invite someone to a meeting that's stored on an iCloud calendar, the server sends the email invitation—but not from your address! The sender appears as *Your Name <noreply@apple.com>*, which means recipients may not recognize the email as coming from you, and rules or filters designed to accept or file email from known senders may fail. However, your name and default iCloud address *do* appear in the event description as the “meeting organizer.” That means if you're scheduling a business meeting but keeping it on your personal calendar, recipients will see your personal iCloud address.

On the other hand, if you invite someone to a meeting on a Google calendar, the email *does* come from your default Gmail address, which also appears as the meeting organizer. (The same goes for Exchange.) You can change the default address for Google calendar on the Accounts tab in Gmail's Settings view.

In each of these cases, the server bypasses your email account completely. The invitations will *not* appear in your email client's Sent mailbox, even if they came from your address.

For local calendars (such as those you're sharing over a LAN), the situation is completely different. You can choose which email address invitations come from, and if you prefer, you can have BusyCal create the invitations as messages in Mail but not send them automatically (so you can verify or edit their contents first). Either way, invitations to events on local calendars *do* appear in your Sent mailbox.

For best results, send meeting requests to addresses in the same domain that hosts the calendar server. For example, if you're using iCloud, meeting requests should be addressed to recipients' iCloud email address (@icloud.com, @me.com, or @mac.com), if you know them. The same goes for Google and Exchange addresses. If you send a meeting request to an email address that does not match your calendar server account, meeting replies and updates may not work properly. The failures vary depending on which service you are using and are not specific to BusyCal.

Schedule a Meeting with Exchange

The process begins as it does for iCloud accounts. You create an event on one of your Exchange calendars in BusyCal. Then you enter the email addresses for one or more people you want to invite in the Attendees field. But when you press Tab to leave the Attendees field, another button appears above the Send Invitation button. Click this button, Available Meeting Times, to display the Availability Panel (**Figure 7**). This window lets you see when the other participants are available—as long as they’re on the same Exchange server—and quickly find a time without conflicts.

Note: Each BusyCal user can specify, for any event, a status (such as Busy or Free) by using the Show As pop-up menu.



Figure 7: The Availability Panel, with the proposed time in brown.

Once you’ve selected a time, click Send Invitation. This causes the calendar server to send that person an email message containing a .ics file with the meeting’s details. The recipient can click that file to add the meeting to any BusyCal calendar; once added, the event displays buttons for “Accept,” “Decline,” and “Maybe.” When the recipient clicks one of those buttons, you as the meeting organizer (as well as any other attendees) can see an icon next to that attendee’s name indicating their status (accepted , declined , maybe , or not yet replied ). In some cases, updating your event to show attendees’ status requires clicking a .ics file in an email response.

If you later modify or cancel the meeting, other participants receive an email notification. But if the participants aren’t using the same Exchange server, the event on their calendars doesn’t update itself automatically—as before, they must open the .ics file in BusyCal (which replaces the old event with the updated version).

If all attendees have accounts on the same Exchange server and use BusyCal or Outlook, this process is pretty reliable, but for those using other calendar servers or apps, all bets are off. You won't be able to see their availability, you can't count on their .ics files being handled correctly, and you may or may not receive replies to your invitations.

Understand How the “Me” Card Is Used

In the OS X Contacts app, you should find an entry for yourself. (Go ahead and check now—open Contacts, and then choose Card > Go to My Card and make sure your name shows up.) That entry should have a little silhouette  icon next to it, indicating that Contacts knows it's *your* entry, not just someone in your address book who happens to share the same name. (If you don't have an entry for yourself, make one. To designate an entry as your “me” card, select it and choose Card > Make This My Card.)

When you have meetings on your schedule, it's important to have a properly designated “me” card, because BusyCal uses it in the following ways:

- When sending invitations to meetings on local calendars, BusyCal needs to know which address to use. The Meeting Organizer Email pop-up menu in BusyCal's Advanced preference pane displays all the addresses from your “me” card.
- Before you can accept or decline an incoming meeting invitation, BusyCal must be able to match the address to which the invitation was sent with an address on your “me” card. (Therefore, it's a good idea to list *all* your active email addresses on that card.)
- In order to edit a meeting you created (whether you created it within BusyCal or elsewhere), BusyCal must be able to match the address shown in the event as “meeting organizer” with one of the addresses on your “me” card.

For further instructions: Now that you know the basics of how meetings work, you probably want more detail about how to manage them in BusyCal. The specifics of sending and responding to invitations, updating meetings, and so on are all found in the BusyCal help at <http://www.busymac.com/tc/meetings.html>.

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Joe Kissell is a Senior Editor of TidBITS, a Web site and email newsletter about Apple and the Internet, and the author of numerous books about Mac and iOS topics, including *Take Control of Your Passwords*, *Take Control of Dropbox*, and *Take Control of Backing Up Your Mac*.

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When not writing or speaking, Joe likes to travel, walk, cook, eat, and dream (in both senses of the word). He lives in San Diego with his wife, Morgen Jahnke; their son, Soren; and their cat, Zora. To contact Joe about this book, send him email at jwk@me.com and include [Take Control of Calendar Syncing and Sharing with BusyCal](#) in the subject so his spam filters won't intercept it.

Shameless Plug

Although I currently write and speak about technology as my day job, I have a great many other interests. To learn more about me, read other things I've written, and find out what I'm up to beyond the realm of Apple products, visit my home page at JoeKissell.com. You can also follow me on Twitter ([@joekissell](https://twitter.com/joekissell)) or App.net ([@joekissell](https://app.net/@joekissell)).

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Adam and Tonya are known in the Apple world as writers, editors, and speakers. They are also parents to Tristan, who is just getting to the age where he can read, understand, and find mistakes in the Take Control series.

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