

# Easy Integration to Google Apps

**G**oogle Apps, or GApps for short, is a free service from Google providing independently customizable versions of several Google products under a custom domain name. It features several [web applications](#) with similar functionality to traditional office suites and includes Google docs, calendar, and sites. BASIS provides toolsets that allow developers to incorporate this powerful cloud functionality directly into their BB® application, expanding the capability and value of their applications.

## What GApps Provides

GApps allows for the sharing of information by using cloud technology for access and storage and provides security, a web browser-based user interface, APIs, and ever-changing improved functionality. Users who create or upload documents to Google can easily share them with any user across the Internet. As they create or upload the documents or “docs,” cloud technology saves it around the world for redundancy, fast user access, simultaneous collaboration, and revision control. Gone are the days of emailing a document or saving it on a shared drive to distribute to others. Sharing a file is as easy as supplying the email addresses of the desired collaborators. Google then sends an email notification to the users with a link to the Google doc.

Users can edit shared Google docs in a web browser, just like in most any other word processor. Therefore, just like BASIS products, GApps is cross-platform and not tied to a particular operating system, nor does it require any additional software. If multiple people have the doc open, anyone who is viewing the document can see all the changes as well as their own, as they occur. In fact, collaborators can even chat among themselves inside the doc. Google provides various security options for defining users, groups, and domains as owners, editors, or simply viewers of the doc.

## What the BASIS GApps Utility Provides

Google Apps are accessible in a BBj application since the Google API provides support for the Java language and BBj supports embedded Java code. The Google Java API is very powerful but has a steep learning curve. To simplify GApps integration, BASIS provides the [GApps Utility](#) that provides programmatic access and dialogs for Google Apps services including docs, calendar, and sites.

### Docs

The [Google Docs](#) methods are quite extensive and allow for uploading, downloading, removing, and setting doc permissions. Dialogs for opening, saving, and selecting a folder for docs behave similarly to the standard open file dialogs that have been in the BASIS language for years (see [Figures 1 and 2](#)). These dialogs run in GUI and BUI, are fully localized, and will prompt the end user to log in to GApps, if necessary. [UserProperties](#), discussed in detail in *Need Cookies? Get User Properties at [links.basis.com/11cookies](http://links.basis.com/11cookies)*, saves valid user credentials to avoid presenting a login dialog on subsequent accesses.



### Calendar

The GApps Utility provides access to the [Google Calendar](#) Web Service and allows the addition of more functionality as the need arises.



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See this in action in a fully functional calendar demo application that interacts with the Google time management Web Service as shown in [Figure 3](#). This Google Calendar demo is a BUI application that retrieves a Google calendar from a gmail account and displays the calendar in a [BBjHtmlView](#) control. BUI is the mode of choice for this application since web browsers have the latest HTML, CSS, and JavaScript necessary to display the calendar. Since Java's HTML viewer control has limited HTML, CSS, and JavaScript capabilities, the calendar cannot display in SysGUI. Run the demo and see how easy it is to add your own calendar events with a custom name, date and time, and description. Additional options include guest invitations, event permissions, repeat criteria, attachments, and reminders.

### Sites

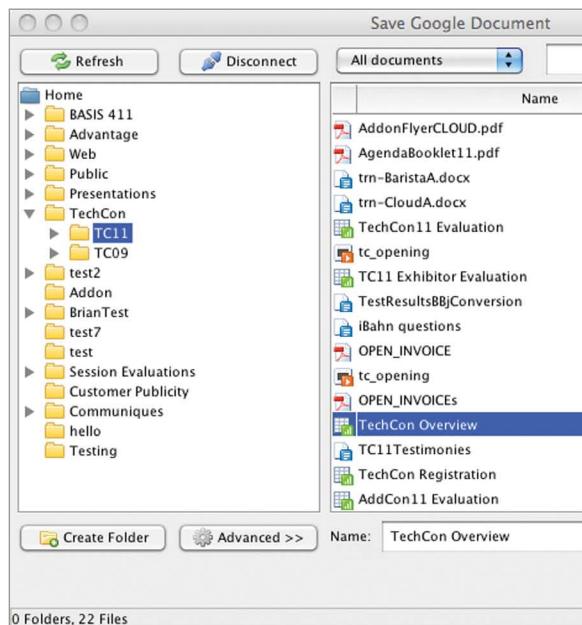
The GApps Utility provides access to [Google Sites](#) which allows web page creation, maintenance, and sharing. The “BUI-GSites” program demonstrates how to modify a web page programmatically. First provide a Domain, Site Name, and Page Title. After successful authentication, this demo retrieves the web page and then displays it using a [BBjHtmlView](#) control. Now dynamically modify the web page by replacing string literals or by specifying the new content for the desired DIV. [Figure 4](#) shows this demo modifying the BASIS intranet Google site.



### GApps at Work

As an example, see how BASIS puts GApps to work in two different applications.

- BASIS modifies their intranet web page on a weekly basis in batch mode to change the PIN numbers for the conference phone system.
- BASIS also uses the GApps utility for their Barista®-based AddonSoftware® accounting system. The GApps Utility saves all necessary documents, including Barista- and Jasper-generated reports, to the cloud in accordance with the BASIS Business Continuity and Disaster Recovery program. >>



**Figure 1.** Google doc save dialog

```

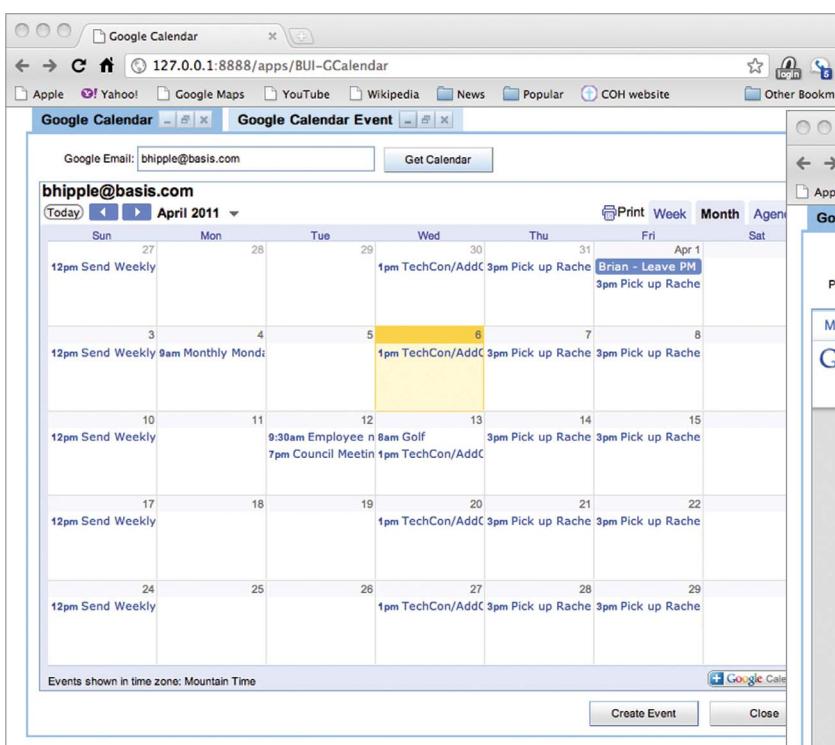
rem Demonstrates using the GDocSaveDialog to select a Google Document to save
rem Use statements
use ::gapps.bbj::GDocSaveDialog
use ::gapps.bbj::GDOC

rem Create a save dialog
declare GDocSaveDialog saveDialog!
saveDialog! = new GDocSaveDialog()
saveDialog!.setDefaultFolder("./TechCon/TC11")
saveDialog!.setDefaultDocument("TechCon Overview")
saveDialog!.setDefaultType(GDoc.getSPREADSHEET_TYPE())
rc = saveDialog!.doModal()
if (rc = GDocSaveDialog.SELECTED())
    title$ = saveDialog!.getDocumentTitle()
    type$ = saveDialog!.getDocumentType()
    folder$ = saveDialog!.getDocumentFolder()
    x=MsgBox(folder$ +"/" + title$,0,"Selected document")
endif
release

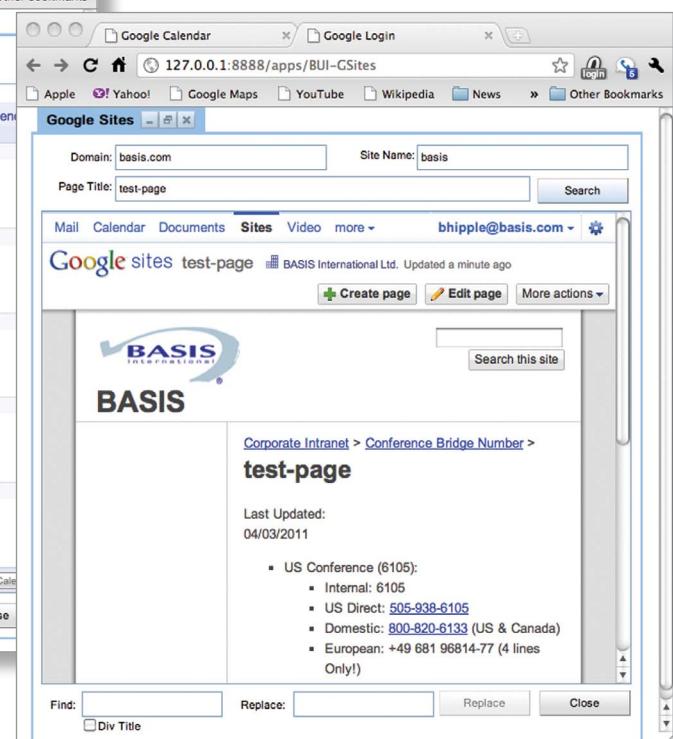
```

11:27 INS  
Code completion database has been created for the filesystem /Users/bhipple/development/trunk.

**Figure 2.** Code that creates the Save Google Document dialog



**Figure 3.** The BUI Google Calendar demo



**Figure 4.** The BUI-GSites demo

## Summary

BASIS is not the only company using GApps. The impressive [three million businesses](#) that use Google Apps include such well known companies as Berkeley Lab, BASF, Capgemini, Delta Hotels, US General Services Administration, Salesforce.com, KLM, Konica Minolta, Motorola Mobile Devices Division, and National Geographic, to name a few.

BASIS' GApps Utility building block will smooth the way for you and your clients to leverage the cloud today. What are you waiting for? ■



See who else uses Google Apps at  
[www.google.com/apps/intl/en/customers](http://www.google.com/apps/intl/en/customers)