



Need Cookies? Get User Properties Cookies

What may come to mind when you read about cookies are those small, round, flat, sweet, crispy treats loaded with carbs. But as you probably know, a cookie in the computer arena is information stored on the client in key and value pairs. Cookies carry over from one visit to the next, generally via a web browser and server. Since the browser is the main component in the new BBx® generations implementation of BUI, it behooves BASIS to provide this functionality in the BBJ® API for applications, both for the browser and for the desktop. And BASIS has provided just that!

Typical Uses

Typical uses for cookies include shopping cart contents, user preferences, identification, and authentication. User preferences can include the customization of a web page or screen's display of fonts, colors, layout, etc. Identification can include items like name, address, email address, etc. Authentication values, such as user names and passwords, can also be stored in cookies. Many e-commerce web sites offer shopping carts in which users can place items to purchase and cookies allow users to store the contents of the shopping cart. End users can even exit the site and return later to find their items still in the cart.



By Brian Hipple
Quality Assurance
Supervisor

Before Cookies

Before BASIS implemented cookies, the program had to store this information on the server on behalf of the client. This often cluttered the server with data, which the client may or may not be able to remove. If there are many clients or if there is a lot of information to save, this data can take up quite a bit of storage space. It is also very hard to uniquely identify clients on the web without requiring some type of login procedure each time the client visits the site, making it difficult to know when to purge data that is no longer needed.

Security

Using encryption ensures that secure information such as user names and passwords are not stored in plain text or transferred to the server in clear text. Another commonly used security tactic is to store a unique look-up value in the cookie and look up this value on the server in a server-side table. This approach does not pass anything over the wire that is at risk for compromise. Shortening the lifespan of the cookie can further secure the information, and the client can always clear cookies, if desired. If the cookie is a look-up value, then the developer can change the value and/or subsequent action on the server.

Implementation

Although cookies are historically a browser concept, BASIS understands that enabling a developer to set and save client information is valuable for both the browser (BUI) and the desktop (SYSGUI). Cookies are implemented in the BBJ API with two methods: `BBJThinClient::setUserProperty` and `BBJThinClient::getUserProperty`. **Figure 1** shows an excerpt of the "Cookies (Get/Set User Properties)" demo program employing the `BBJThinClient::setUserProperty` method.

```
method protected void setCookie(BBJString key$, BBJString value$)
  if (#TC! <> null())
    #TC!.setUserProperty(key$, value$)
  endif
methodend
```

Figure 1. The Cookies demo program saving a user property

In BUI, cookies are stored on the client using the standard JavaScript cookie API. The properties are set with the domain that is serving the BUI application and are accessible by other BUI applications that are served below the URL for the application. If the BUI application URL is secure (HTTPS) when the property is set, the program is only allowed access to the cookie over other secure connections. In SysGUI, the information is stored using [Java Preferences API](#) under the `com.basis.bbj.client.$default` node. In the future, cookies set in SysGUI will have similar scope as in BUI and will offer the ability to specify an expiration date like their BUI counterparts. >>

UserProperty Demo

User Information
(* fields are required.)

*First name: Jim

*Last name: Smith

*Job title: Manager / Supervisor
If other: _____

*Company: BASIS International

*Industry: Technology Manufacturer (hardware, software, peripherals, etc.)
If other: _____

*Address: 5901 Jefferson
Address: _____

*City: Albuquerque

*State: New Mexico (United States and Canada only)

*Post code: 87109

*Country: United States

*E-mail address: jim@basis.com

*Phone number: 505.938.8981 (Use '.' or '-' for separator)
Fax number: _____ (Use '.' or '-' for separator) U.S./Canada Other

*Planned or current use of BASIS products:
Application Developer
If other: _____

Submit Use Demo Data Clear Cookies

Figure 2. Cookies in SysGUI

UserProperty Demo

lynx.basis.com:8888/apps/BUI-Cookies

UserProperty Demo

User Information
(* fields are required.)

*First name: Jim

*Last name: Smith

*Job title: Manager / Supervisor
If other: _____

*Company: BASIS International

*Industry: Technology Manufacturer (hardware, software, peripherals, etc.)
If other: _____

*Address: 5901 Jefferson
Address: _____

*City: Albuquerque

*State: New Mexico (United States and Canada only)

*Post code: 87109

*Country: United States

*E-mail address: jim@basis.com

*Phone number: 505.938.8981 (Use '.' or '-' for separator)
Fax number: _____ (Use '.' or '-' for separator) U.S./Canada Other

*Planned or current use of BASIS products:
Application Developer
If other: _____

Submit Use Demo Data Clear Cookies

Figure 3. Cookies in BUI



In Action

A very familiar and well-used BASIS form is the user information required before downloading a product from the BASIS website. Our TechCon demo of the new cookie functionality uses a BBJ application to mimic the download form, obtaining the same user information and subsequently storing the field information in cookies when the user presses the [Submit] button. When the program runs again in either SysGUI (**Figure 2**) or BUI (**Figure 3**), it populates the form with the information from the cookies. In the demo, as well as the real product download page, cookies save the user both time and aggravation. Without the benefit of cookies, users would have to enter their information each time they wanted to download a new release of a BASIS product.

Access the Cookies demo by selecting demos when installing BBJ and then run the Cookies demo from the Demos LaunchDock. Be on the lookout for our product download page changing from a hard-to-maintain Java script program to an easy-to-create/maintain BUI application that uses cookies.

Summary

Cookies are a wonderful way of saving client information where it belongs – on the client. Unlike the outcome of the popular children's book "*If You Give a Mouse a Cookie*" in which the boy is busy all day trying to satisfy a hungry mouse, giving computer coders "cookies" translates into time savings and great satisfaction for users of the resultant application. Give cookies a try and take a bite today! ■



- Read more about cookies at www.whatarecookies.com
- Numeroff, Laura Joffe., and Felicia Bond. *If You Give a Mouse a Cookie*. New York: Laura Geringer, 2007. Print.