

Customizations for BizPhone/BizVoice/Zentrex/Globe/b3works Apps

1. Managing calls from external apps

The BizPhone/BizVoice UC/Zentrex/Globe/b3works apps allow users to use URLs with custom protocols (tel:// and bizphone://) to manage calls from external applications. If invoked via custom URLs, the app will start (if it is not running) and perform the requested actions. The user must have already been logged in to the app prior to invoking the URL. If the user has not logged in yet, all custom URLs will be ignored and an error message will be written to the log file, if enabled.

Use the following custom URLs to manage calls:

- bizphone://call/XXXXXXXX (for both desktop and mobile versions of BizPhone)
 - Call a number via BizPhone
- tel://XXXXXXXX (for desktop versions only)
 - Call a number via BizPhone
- bizphone://answerCall (for desktop versions only)
 - Answer a ringing incoming call
- bizphone://disconnectCall (for desktop versions only)
 - Hang up a connected call, or reject a ringing incoming call

For the custom URLs to work from a web browser, the app should have been installed as administrator to set up the necessary registry keys (the BizPhone app can still be run as a normal user).

On Windows 8 and 10, use “Set Default Programs” in the Control Panel to ensure that the tel:// protocol has been associated with the app - visit [this link](#) for details. No settings are needed for Windows 7 users.

On Mac OS, use RCDefaultApp (<http://www.rubicode.com/Software/RCDefaultApp/>) and make sure that tel:// is associated with BizPhone - visit [this link](#) for details.

No specific configuration is required to use bizphone://call/ URLs on mobile devices, although Android users might be prompted to select the BizPhone app when clicking on the link for the first time.

Some browsers might ignore custom protocol URLs if invoked directly via the address bar. The custom URL should be tested by creating a HTML with a hyperlink to the required URL instead.

On the Windows version, custom URLs can also be passed directly to the application executable as the first command line parameter and the app will still handle the URL without involving the web browser. For example, the following command line will call the number XXXXXXXX via BizPhone:

```
C:\Program Files (x86)\BizPhone for Windows\BizPhone.exe  
bizphone://call/XXXXXXX
```

For b3works, BizVoice UC, Zentrex and Globe apps, the custom protocol will be b3works://, bizvoiceuc://, globe:// and zentrex:// respectively.

2. Customizing call events

The Windows version of the app exposes certain call events via a Win32 DLL named BizPhoneExtension.dll located in the installation folder which contains the following function headers. For each function, a return value of 0 indicates success while any other values indicate that a failure has occurred. This feature is currently not available on other platforms.

```
INT bpNotifyCallEvents(BOOL isIncoming, LPWSTR contactName, LPWSTR  
contactNumber, LPWSTR originatingNumber, INT callId, INT callStatus)
```

This method is called when an outgoing or incoming call event is received.

Parameters:

- **isIncoming:** TRUE if the call is an incoming call, FALSE if the call is an outgoing call
- **contactName:** name of the caller or contact
- **contactNumber:** number of caller or contact
- **originatingNumber:** for incoming calls, this parameter contains the number which was called by the caller, if available.
- **callId:** the ID of the call
- **callStatus:** the status of the call (0=INVALID, 1=CALLING, 2=INCOMING, 3=RINGING, 4=CONNECTING, 5=CONNECTED, 6=DISCONNECTED)

```
INT bpNotifyCallExtraData(INT callId, LPWSTR extraInfo)
```

This method is called when extra information is available for an existing call. For example, this information could be the name of the queue associated with an incoming call.

Parameters:

- **callId:** the ID of the call

- **extraInfo**: a string containing the available information

The default BizPhoneExtension.dll that comes with the installation does not do anything in the above methods and simply returns 0 to indicate success. Developers may compile their own versions of the DLL to perform the required customized actions and overwrite the original DLL. After restarting the app, the new DLL with the customizations will be loaded and available for use. Take note that the DLL should be built for 32-bit architectures (e.g. x86) as the BizPhone for Windows app is 32-bit. Refer to [this link](#) for a sample implementation of this DLL using Microsoft Visual C++.

3. Debug mode

Debug mode, if enabled, allows the BizPhone app to write diagnostics data into log files for troubleshooting purposes. This can be done on the desktop versions by editing the config file and setting the **saveDebugLog** entry (for the Windows version) or the **KEY_LOG_ENABLED** entry (for the Mac OS version) to **true**. Alternatively, for both desktop and mobile versions, to enable debug mode, update the relevant settings for the BizPhone account, restart the app and re-login to the BizPhone account. Values for the **remoteSaveDebugLog** and **KEY_REMOTE_LOG_ENABLED** entries in the desktop app config files reflect the debug setting associated with the BizPhone account. If enabled by changing the config file, debug settings will be reset the next time the user logs out. On the contrary, if enabled by updating BizPhone account settings, debug settings will persist even after the user has logged out of BizPhone.

4. Log and config files

Default config file locations:

- Windows: C:\Users\[username]\AppData\Roaming\XXXXWin32Config.xml
- Mac OS: ~/Library/Preferences/com.b3networks.macos.XXXX.plist
- Android: stored in user preferences
- iOS: stored in NSUserDefaults

Default log folder locations:

- Windows: C:\Users\[username]\AppData\Roaming\XXXXAppLog
- Mac OS: ~/Documents/XXXXLog
- Android: stored within the app's data folder
- iOS: stored in the BizPhoneLog folder within the app's Documents folder.

Where XXXX is the name of the app build (BizPhone/b3works/Globe/Zentrex).

For desktop versions, if there is a need to manually change the config file, quit the app first before editing. Any changes to the config file will require restarting the application. On Mac OS, editing the plist file may also require rebooting for the changes to be recognized.

If debug mode is enabled, a pair of timestamped log files - one contains messages related to the app while the other contains messages related to SIP - will be created each time the BizPhone app starts. The log folder will be cleared periodically to save disk space. If there is a need to investigate the log files while the app is running, make a copy of the files and work on it instead; otherwise the log files might be locked and the app will not be able to update the files. Any errors encountered when handling custom URLs as well as BizPhoneExtension.dll will be written to the log files.

5. DLL source code

Visit [this link](#) for more information.