

What Is PL/B Web Server?



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What Is PWS? OVERVIEW



- **Client/Server PL/B runtime environment**
- **Like plbserve but with light clients**
- **Clients are standard web browsers**
- **Server contains more logic than plbserve**
- **Communications uses HTTP and is connectionless**
- **Provides graphic user interface on any OS with a web browser**
- **Enhanced UNICODE support**
- **Same administration features as plbserve including WATCH**

Technologies Used



- HTML 5 <http://www.w3schools.com/html/default.asp>
- JavaScript <http://www.w3schools.com/js/default.asp>
- CSS 3 <http://www.w3schools.com/css/default.asp>
- jQuery <http://jquery.com/>
- jQuery UI <http://jqueryui.com/>
- JSON <http://www.json.org/>

Connectionless Communication



- **Runtime is not permanently connected to client**
- **Interaction performed through integrated HTML web server**
- **Allows client to be suspended and resumed**
- **iOS requires this feature with only one task running**

Integrated HTML Web Server



- Provides HTTP protocol engine
- Multi-threaded
- Works with both basic sockets and SSL
- Only a PL/B CGI interface
- No ASP or PHP support
- .plc as mime type

Testing



- **Operating Systems**

- **Android 4.4 (KitKat)**

- **iOS 8.1**

- **Windows**

- **OsX**

- **Chrome OS**

Testing



- **Browsers**

- **FireFox**

- **Chrome**

- **Safari**

- **Internet Explorer**

- **Edge**

Security/Performance

- **PL/B compiler 'R' option prevents programs from being run directly**
- **Support for SSL (Secure Sockets Layer) to provide secure communications**
- **Programs can exist outside integrated HTML web server root directory**
- **Data is kept at the server**

Security/Performance



- All messages are cached
- Flushing occurs only when user interaction is necessary
- Server side runtime re-written to retain object information

Program Startup



- **.plc request is converted to send bootstrap page**
- **Page loaded is either <program>.html or plbwebstart.html**
- **Page is processed to have program id**
- **Browser loads page and PL/B runtime integration javascript**

Program Startup



- **PL/B runtime task is created**
- **Communications takes place using integrated HTML web server**
- **Use runopt= to specify runtime options**
- **Use cmdline= for S\$CMDLIN support**

Advanced Licensing



- **2000 max child tasks**
- **PLBWEB_MAX_TASKS** can be used to reduce this number
- **Child tasks can be active, idle or suspended**
- **Idle or suspended tasks need no licence**

Advanced Licensing

- **Idle when ALERT, ERROR dialog, KEYIN, MENU, or EVENTWAIT**
- **PLBWEB_IDLE_TIMEOUT sets the idle detection timeout**
- **PLBWEB_IDLE_MAX_TIMEOUT sets the idle termination timeout**
- **PLBWEB_MSG_TIMEOUT sets the suspend detection timeout**

Advanced Licensing



- **PLBWEB_SUSPEND_MAX_TIMEOUT** sets the suspend termination timeout
- **Child tasks that become active again must be able to get a license**

Basic Configuration



- **Simplified configuration based upon keywords**
- **Setup like a Application Server**
- **Use PLBWEB_HOSTNAME and PLBWEB_LOCALIP for command interaction**
- **Use PLBWEB_ADDRESS keyword to assign an IP address and optional port**

Basic Configuration



- Port 80 can be used
- **PLBWEB_PROGRAM_ROOT** keyword specifies a root directory where PL/B programs are located
- **PLBWEB_ROOT** specifies the integrated HTML web server root directory
- **PLBWEB_DEFAULT** keyword specifies the default PLB program name or web page

Basic Configuration

- **PLBWEB_LOGNAME** keyword specifies the logfile name
- **Keyword(s) to setup SSL**
 - **PLBWEB_SSL_CERTFILE**
 - **PLBWEB_SSL_KEYFILE**

Advanced Configuration

- **Use PLBWEB_CGI_INFODIR to capture CGI (Common Gateway Interface) data**
- **Use PLBWEB_LOG_HTTP to log HTTP information**
- **PLBWEB_IMAGES keyword specifies a directory for extracted images**
- **PLBWEB_SAVETOCLIENT keyword specifies a directory for download of a file**

Runtime Customization



- **Error conditions are in html pages that can be customized**
- **Use PLBWEB_USER_CSS to specify a custom css file**
- **PLBWEB_ERROR keyword defines behavior on an un-trapped error**
- **PLBWEB_MENU keyword defines the behavior on runtime termination**

Runtime Customization

- **SETMODEs** can change both **PLBWEB_ERROR** and **PLBWEB_MENU**
- **PLBWEB_MSGBUFSIZE** keyword allows the message size to be increased

That's All!!

