

Whitepaper:



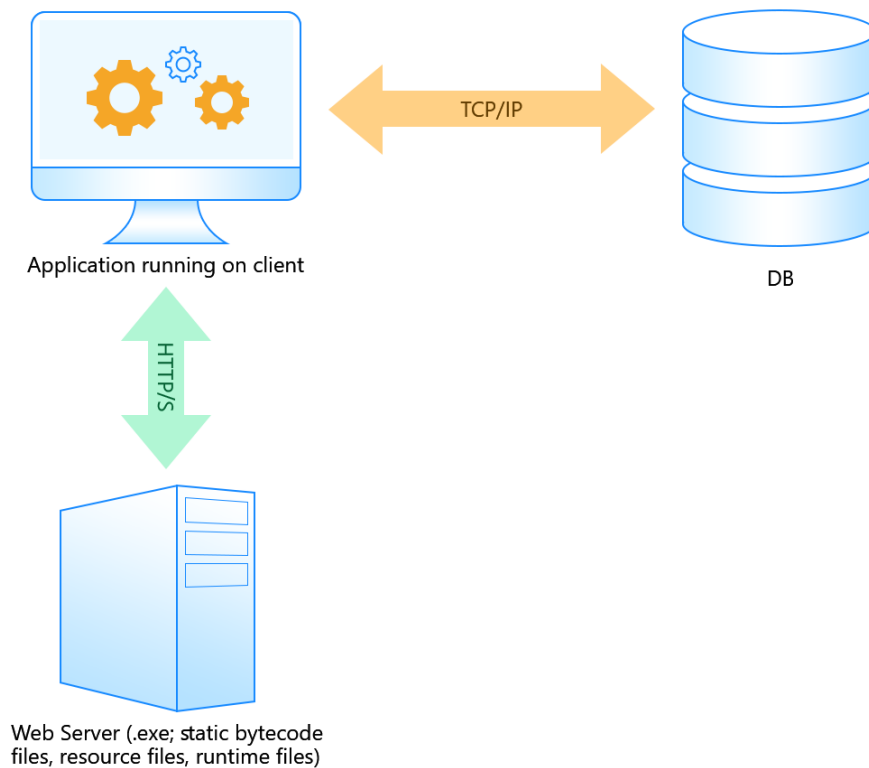
# AUTOMATING ON-PREMISE DEPLOYMENT OF POWERBUILDER APPS

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## POWERCLIENT

The upcoming revision of PowerBuilder (PowerBuilder 2019 R3) introduces a new deployment method: PowerClient. PowerClient aims to solve the headaches associated with deploying and updating client/server applications on premise (i.e. local area network). It will no longer be necessary to create your own installation programs or to manually install and update PowerBuilder applications to each Windows desktop machine.

## POWERCLIENT ARCHITECTURE



The runtime architecture of the PowerClient is exactly the same as a traditional client/server application. All that is changed is the process of distributing the PowerBuilder application to users is now centralized. Specifically, all the application files are hosted on a Web server (that can be deployed on-premise), and then the application is distributed from the Web server out to the users.

## POWERCLIENT DEPLOYMENT

### Application compilation

Traditionally, when you compile a PowerBuilder application using p-code, PowerBuilder builds PowerBuilder dynamic libraries (PBD files). The PBD files contain everything, such as visual objects, DataWindows/DataStores, PowerScript code, and embedded SQL. All the PBD files must be installed to the desktop and work together to get the application running.

The compilation with PowerClient is different from the traditional p-code approach. All PBD files are broken down very granularly into each individual object/definition file. For example, each SRW, SRD, SRU, etc. file would have its individual corresponding p-code file (that have new file extensions, such as .dwo, .apl, .fun, .win, .udo) instead of a monolithic PBD files. Then each version of every p-code file has a unique identifier so that when a user runs the client/server app the p-code files can be incrementally downloaded and updated, depending on the function the user is accessing.

So you will see that with the new compilation approach, it is enhancing PowerBuilder compilation of PBD files so that the PowerClient's update routine can reliably and incrementally update these for client/server applications.

### Web server deployment

After the app compilation, the following types of files will be deployed to the Web server:

- P-code files that are granular in size (not the monolithic PBD format).
- The application .exe file and supporting files such as resource files, OCX files and desktop runtime files (e.g. PBVM). Such files are the same as in client/server PowerBuilder applications. There will be dedicated configuration settings for developers to specify these supporting files that will be packaged and deployed with the application to the desktop.

Although a Web server is used, technically it is acting as a file server (i.e. no code executes on the Web server) and the Web server would typically be deployed on-premise since these are client/server applications.

### Client deployment

The PowerClient will be initially installed by accessing the app URL in a web browser. After that, the app has no dependency on a web browser (type, version, or settings) but will run and update itself as needed over the local area network.

## KEY MANUAL TASKS

PowerClient is a fully-automated desktop deployment solution. No code changes are required to benefit from this solution. You simply need to configure some deployment options and the Web server.