Tips & Tricks #30 – Technical Information on Cloud-Based Systems and Printing

Passport's products offer a modular Windows based orientation and structure and reside quite comfortably on a Cloud-Based System (CBS).

A CBS can present special issues with respect to accounting systems related to requirements for producing reports and forms; either saving or printing them. Fundamentally, this is due to users being remote with the only available printers being those that are actually attached to the remote workstations, i.e., there are typically no "local-to-server" based printers.

A related issue is the production of files which can be stored local to the cloud server but which will sometimes have to be moved to the remote workstation to be processed on that remote.

In the case of Microsoft's CBS, Azure, these issues are substantially minimized because of the robust and automatic set of redirected resources available when using Microsoft's enhanced Remote Desktop Client for CBS. When a user signs on to their Azure (virtual) desktop, any hard drives and printers on their remote workstation are (optionally) automatically connected to the Azure session running in the cloud. So, from the user's point of view, running a program in the cloud allows them direct access to their own (remote) drives and printers just as if the drives and printers were connected to the cloud servers. (Note: although Azure is being discussed in detail here, other remote access software and other Cloud-Based Systems operate is a similar fashion with similar features.)

Here is the setup for a remote drive connecting the cloud desktop to the remote workstation's D drive:
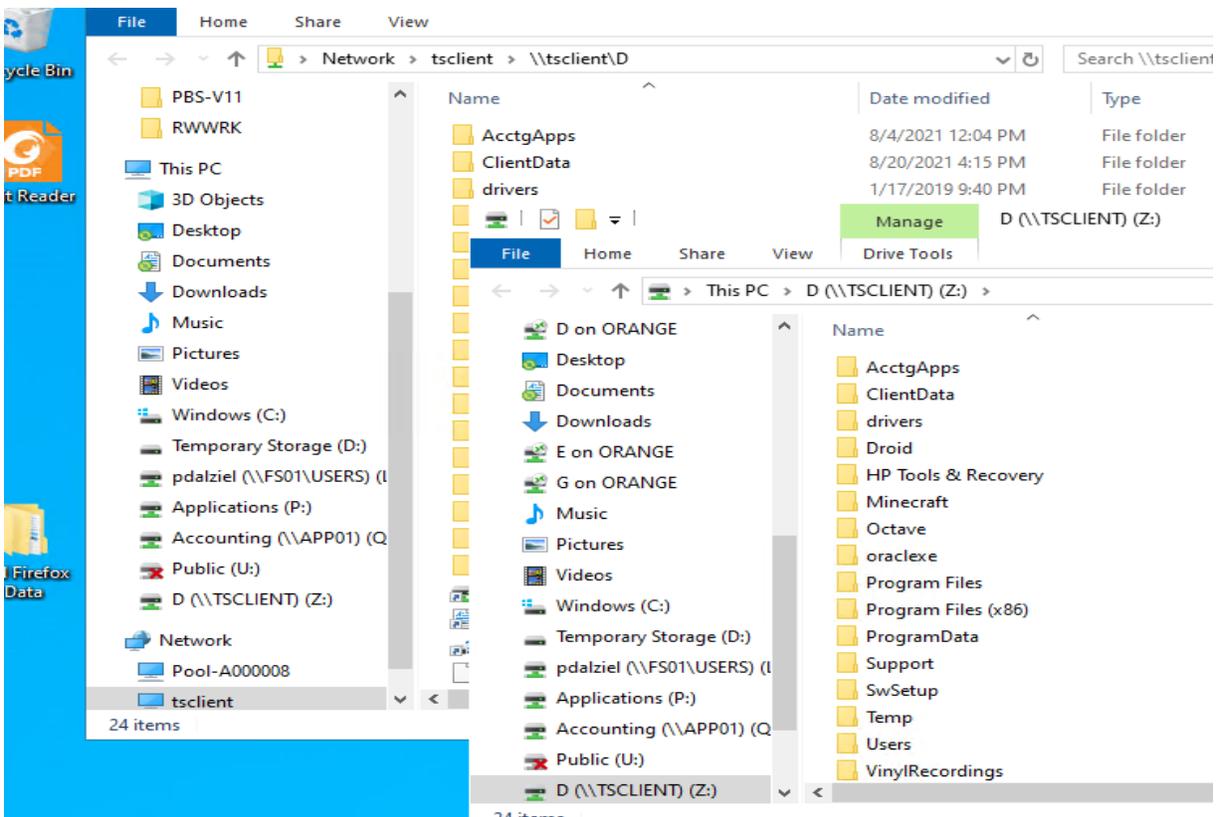
Highlighted:

a) On the bottom left, the network designation for the remote workstation. This follows, more or less, standard remote desktop conventions showing the remote computer (top level folder) as 'tsclient' (terminal services client).

b) The background window shows the display of that top-level folder, in this case, a workstation's 'D' drive and several folders within that top level.

c) The foreground window shows that these redirected drives can be mapped if necessary/useful – the same few folders are highlighted in the display of the mapped drive as is the drive mapping display at the bottom left of the window.

As for printers, the redirection is similar and very robust:
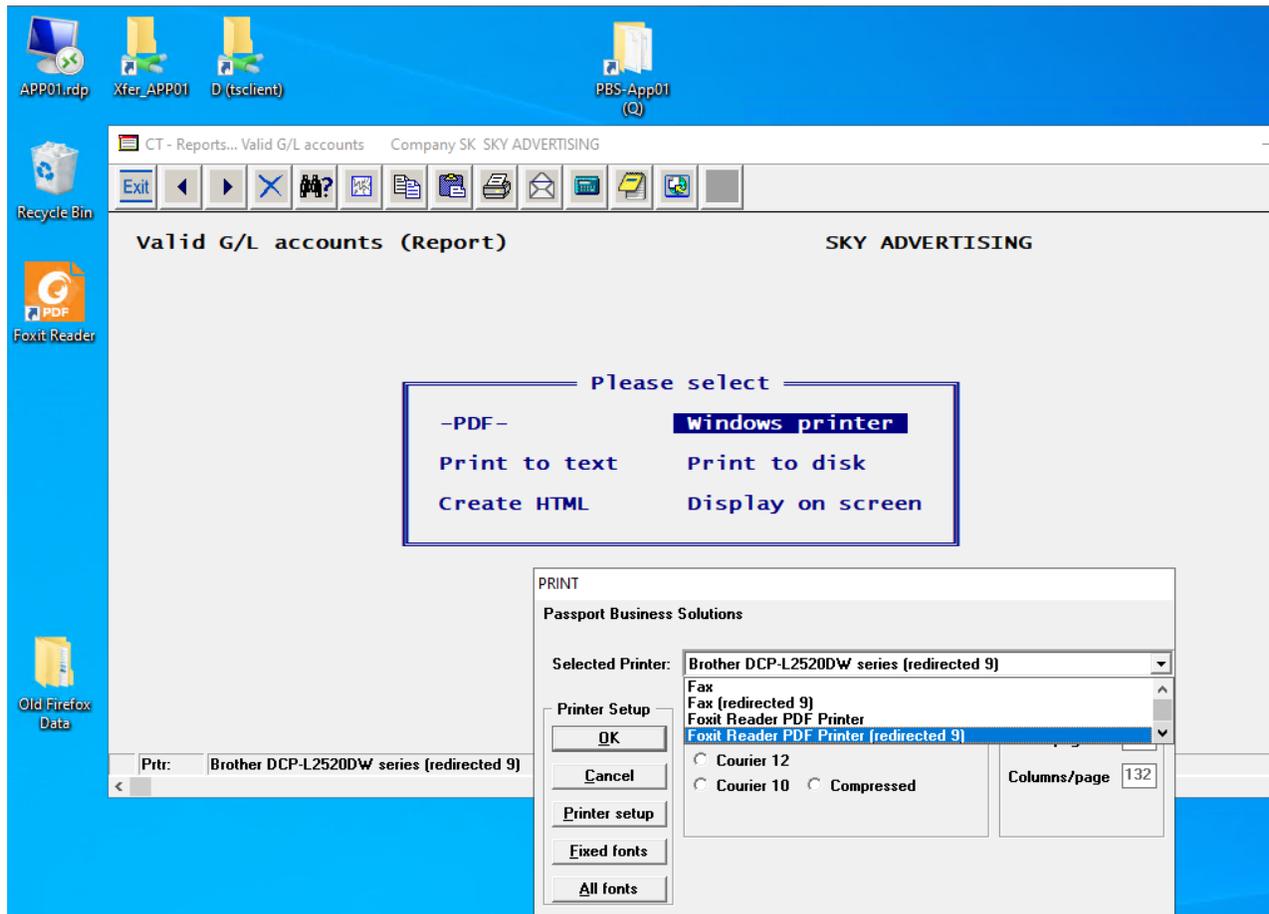
In this example, when printing a Valid GL accounts list and after selecting Windows printer, the list of available printers includes (remote) Brother DCP-2520 printer as well as two PDF printers. The first one is local to the cloud network and therefore will print to local cloud hard drive resources, e.g., the local "Q:" drive (top center). This was installed for the accounting users to store PDFs on the local cloud server. The second PDF printer is a *remote* PDF printer installed on the workstation. It is the highlighted "Foxit Reader PDF printer (redirected)".

These functions work very well in our current Passport/CashPoint versions and older versions – as shown in the V11.3 example above, as long as you are using Windows printing.
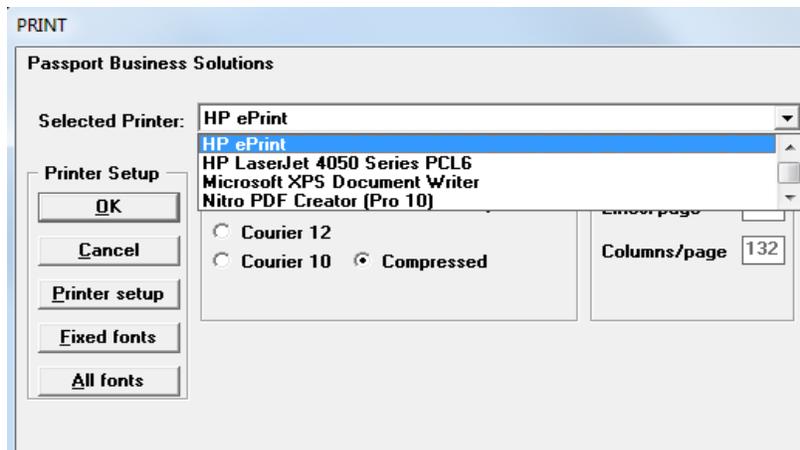
PBS legacy printing versus Windows printing

Behind all of this is the use of "Windows printing in PBS". In the above discussion there are references to "Windows printing". Here is a further explanation.

First, whenever you go to print, you get a PBS selection window like this:
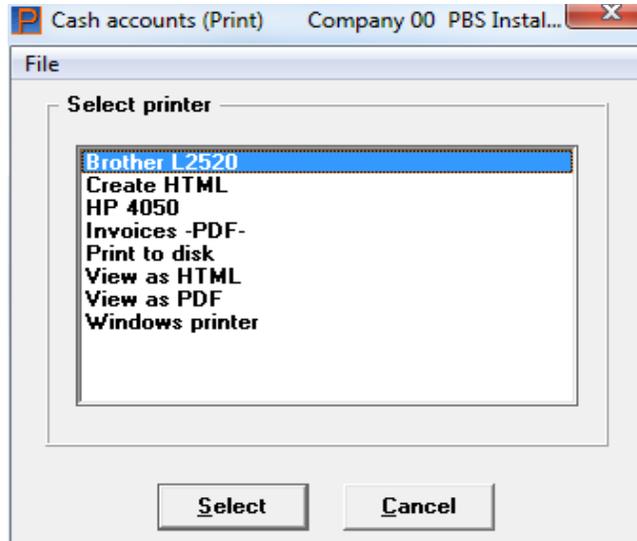
This is the <u>PBS printers list</u>. The items "Brother L2520", "HP 4050" are "real" printers. The "Create HTML", "Invoice -PDF- "and "Print to Disk" are special PBS functions that create an HTML file, a text file, or a PDF file instead of printing to a printer. The 2 "View …" printers are also special functions within PBS that not only create the appropriate HTML or PDF file but also automatically display it. All of these are "PBS" printers controlled by the accounting system.

The last one on the list is "Windows printer" and this "printer" is simply a gateway to access the Windows mode of printing which is shown as the Windows printer selection menu:

This selection screen is similar to the printer selection menu you will get from Excel or Word and gives you access to any printer that has been attached to your system.

So, what is PBS printing versus Windows printing?

As most of you know, the PBS Accounting system has its roots going back to a product called RealWorld®. This system was designed for older systems running older versions of the operating system and managed its own printing functions essentially outside of the operating system. So essentially, the accounting program sent the print output directly to the printer or to a queued area where print output was held until it could be sent to the printer. This meant that the PBS accounting system was responsible for fonts, font sizes, portrait versus landscape and what kind of protocol the particular selected printer used, etc. (Hence the need to choose the printer type when setting up a PBS printer.) Fundamentally, if the PBS system didn't have the right codes for the printer, the printout would not work.

This older mode of printing we refer to as "classic" or "legacy" printing.

With changes and advances within the Windows operating system, Windows took over more and more of the scheduling and control of what went out to the printer. This improvement meant, for example, that two people printing reports at the same time from different computers would not overwrite each other's outputs. However, it also meant that the PBS accounting system had to "talk" more and better with the operating system to work properly. As a result, the setup in PBS got more complicated and more specific and sometimes failed to work properly if the printer required functions that PBS did not know about. And indeed, some modern printers are completely dependent on the use of the Windows drivers and so will not work with PBS classical printing.

PBS Windows printing, on the other hand, uses the print facilities built into the operating system, i.e., if you, through the program, want to print small characters or landscape mode - you ask Windows to do so. "Windows printing" uses the same protocols and techniques as Excel or Word when printing is to be done. In this mode, PBS tells Windows what to do and relies on the *Windows drivers* to be able to do it with any and all the various types of printers available. For PBS this meant giving up doing any report formatting (like font size) within the accounting system and handing this function off to Windows. But it also meant, and more importantly, that *any printer that Windows supports can be used by PBS*. This even includes non-printer "print functions" such as printing to create a PDF, sending the output to OneNote, or sending the output to a fax.

In relation to Cloud-Based system discussed above, Windows printing gives PBS the ability to use redirected printers – printers that are remote to the servers and the desktop you are connected to. PBS legacy printers cannot be used in this environment.

In some cases, PBS, being able to use Window printing, had to "give up" controls required by the "legacy printing" on the print details such as font sizes, etc., and this meant that the report needing special features (especially forms like invoices) had to have changes made to the print program so that it could be used either with legacy printing or Windows printing.

As of now, PBS speaks "both languages", i.e., it retains the ability to use the older "classic" / "legacy" printing methods or it can use Windows printing for all reports and forms including checks. (There is currently one exception and that is the printing of W2's in Payroll which will be fixed shortly.)

We suggest that even if you are not in a Cloud-Based system, it is probably time to start transitioning to a modern interface and the "Windows printing" functionality exclusively as preparation for the future.