




Progress
Electronic Magazine

An Amduus™ Information Works, Inc. Publication

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Table of Contents

Integrating PHP with a Progress Database.....	4
Other Progress Publications Available:.....	11
Article Submission Information:.....	11

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Publisher's Introduction

Well, it would seem that I have some free time again – looking for the next contract! If you know of any contracts or full-time jobs available, please let me know. You can find my resume at <http://amduus.com/Resumes> in PDF and MS Word format.

Last month I had hoped to get some PHP/Progress integration articles together, but as some of you may know – that didn't happen!

We are having better luck this month. In this issue we explore hooking PHP up to a Progress data source. This way, you can directly manipulate a Progress database via PHP routines. The benefits to this is that you can have your web site seamlessly integrate between Webspeed and PHP without a bunch of rigamarow programming.

As we know, Webspeed sometimes doesn't have all the goodies that PHP has (like LDAP access, binary file upload, etc.) Wouldn't it be nice to have a *sessionid* set up and then on upload of a file, simply fill in the database where the file is for the Webspeed program to deal with? Not to mention if a piece of data coming in from a web page needs to go into not only a Progress database but another database to boot! This can simplify a lot of things.

I also have some bad news. I am working on a version of Progress that really is approaching half a decade in age. While **I am a Progress programmer and plan to continue being a Progress programmer** – I have made the decision for Amduus to be more oriented to PHP/PostgreSQL/MySQL development. The fact is, since those \$100K+ contracting jobs are gone - I can't afford Progress anymore.

A friend of mine a couple of months ago said “Scott, they are willing to spend fifty bucks on cable TV, but they aren't going to contribute even five bucks to your E-Zine.” Turns out she was right. Not a single donation. I had thought that perhaps the value of the E-Zine would appear apparent to the readers, but the irony is the apparentness of it's value was really to be impressed upon me. I might make special issues of the E-Zine available, but this is pretty much going to be the last issue of the E-Zine.

I have learned a lot about distribution and E-Zine writing though – so not a total waste of time. I will be starting an E-Zine on PHP/PostgreSQL. I will make the announcement of the subscription page on <http://amduus.com> when I get something up and going. I have already started a new E-Zine on film making available at <http://bootstrapfilmmaker.com> – not exactly Progress oriented but might be fun all the same.

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Integrating PHP with a Progress Database

*By Scott Auge
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Introduction

Often people complain about Progress being an “island unto it's self.” Hopefully this article will put that myth into the ground! I have done a lot of integrations¹ between Progress technologies and other systems (BSD Sockets, Wireless X.25 as well IBM MQ Series/WebSphere MQ.) It is one of the things I am known for (or at least hope to be!)

For those who don't know what PHP is, you really need to crawl out from under the rock you have been hiding under. :) PHP is the most popular dynamic web site middle-ware on the Internet² according to NetCraft. PHP is a bit like Webspeed in that it allows you to interact with a database and to programmatically generate web pages/data from a web server.. Unlike Webspeed, it is an open source technology. It is a piece of software that has a lot of maturity to it. It is pretty easy to run down to the local bookstore and find something about it.

Like Webspeed programs, you can run PHP programs from the Web or from the command line. PHP has a lot of stuff built in – from sending emails, to LDAP communications, to calling out to other web sites “behind the scenes,” to sending and

1 An early integration example was the use of shared libraries in E-Zine Issue 2.

2 Must by why so many people started salivating over a PHP to Progress integration article!

receiving binary files. A lot of that you need to code yourself³ in Progress' Webspeed product.

You might be thinking “Hey, what is up with this PHP stuff – ain't this Progress?” Well, actually Progress Software Corporation has been diddling in the PHP world also with a subsidiary called NuSphere⁴ (<http://www.nusphere.com/>). For some reason NuSphere doesn't do a lot of talking about integrating their product with Progress' RDBMS. Maybe this article will find it's way to them. :)

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Michelle Pond

Architecture

There are three basic manners in which you can integrate PHP with Progress. One is to have Progress call PHP... and of course the reverse to have PHP call Progress. A third way is to use the dynamic libraries functionality of Progress to interact with the PHP shared library. This article is going to focus on PHP calling into Progress. One way provides a way to potentially change the database, the other using another means is a manner of looking up information in the database.

³ Be assured – there is an open source movement in the 4GL also. Be sure to stop by Amduus.com/OpenSrc as well as freeframework.org. There are far to many resources to list out in this footnote!

⁴ Your author likes the freebie type software. You need to purchase software from NuSphere. I download and compile from source. My belief is, if you start from scratch – you have a better grip on what is going on in there! (I am a pretty good C/C++ programmer though.)

How can we smoothly transition from Webspeed to PHP and back to Webspeed again? For easy flow, one can use the NVP one normally does to move information from one web page to another. Using form fields and cookies⁵ to post from a Webspeed generated page into a PHP generated page is pretty straight forward.

Of course, lets say the PHP page gets a bit of information, perhaps the sessionid⁶ from your Webspeed app. You want to pull in information from the Progress DB to help generate that web page. It just so happens that Mark Newnham (<http://www.geocities.com/ncsoft/progress/prophp.htm>) has a tool⁷ for the PHP programmer to abstract the connection to a Progress DB⁸ via the command line.

Lets go for a ride through some example code. First we have a Progress Webspeed generated web page generated by:

```
<!--WSS
/* sessions.i provides a cSessionID = GET-VALUE("SessionID") and associated */
/* routines for session management.                                     */
{sessions.i}
-->
<html>
<body>
<form method="POST" action="my.php">
<input type="hidden" name="SessionID" value="`GetSessionID()``">
Your Name:<input type="text" name="Name"><input type="submit">
</form>
</body>
</html>
```

-
- 5 Your cookies should be created to the domain with the path of / so that you are not dependent on PHP or on Webspeed pathing to get your cookies.
 - 6 This is a key into a table in your database. By using this key unique to each user and a name, you can remember items in the database and not have to worry about making a zillion hidden fields in your pages to pass information from page to page.
 - 7 Prophp is under the GLP license. Given most PHP programs are distributed with source – this shouldn't be a problem.
 - 8 You can also reach the Progress DB via an ODBC link on PHP – however, my current version of Progress doesn't include the client side driver for free. I want this to be reachable by everyone who uses the two tools and so I go with the CLI route.
-

The above program will generate a web page which will post the NVPs SessionID and Name into the my.php program.

Now we want the my.php program to interact with a routine on the Progress side that will return that information:

```
<?php
include_once("prophp.inc");
include_once("prophphelp.inc"); // Not part of prophp!

// Create an object to talk to Progress

$MyDLC = new DLC;

// Set Error flag to nothing and call the progress program

$MyDLC->sysErrNo = 0;
$MyDLC->Execute("/appl/sop/api/nameinfo.p");

// Use the goodies in prophphelp.inc to chop up the results
// into an array.

$Results = pro2array($MyDLC->dlcData);
?>
<html>
<body>
Name: <?php print($Name); ?><BR>
Street: <?php print($Results["Street"]); ?><BR>
City: <?php print($Results["City"]); ?><BR>
State: <?php print($Results["State"]); ?><BR>
ZipCode: <?php print($Results["ZipCode"]); ?><BR>

</body>
</html>
```

So what happens in the above program? The user will submit from the web browser into my.php which will create a DLC object used to interact with the Progress client. All the NVPs as well as the web server CGI variables will be turned into environmental variables for the Progress client to read with OS-GETENV(). So for example, for nameinfo.p to pick up the value plugged into the Name form field, it would use:


```
DEFINE VARIABLE cName AS CHARACTER NO-UNDO.  
ASSIGN cName = OS-GETENV("Name").
```

Now the object supplied by Mark actually returns all the information from Progress in a text property named dlcData. Unlike Progress, this variable is not limited to 32KB so if you wanted to return a large result set in it - you could. It is best to format this output in some way so that you can use an array to view and navigate the returned information. The best way to do this is through delimiters and the PHP functions list() and explode().

Another option, is to use the built in XML tools of PHP to call into a Webspool program that returns XML and chop it up into something that the rest of the PHP program can use. A useful Webspool program for this kind of interaction is Denkh XML Reporter⁹ (<http://amduus.com/OpenSrc/SrcLib/Denkh/>).

Denkh XML Reporter will actually take a dynamic query as a NVP and return the results as an XML document.

See <http://amduus.com/OpenSrc/SrcLib/Denkh/Denkh/doc/XMLReportGenerator.pdf> for more information about how to use this.

Scott Auge is the founder of Amduus information Works. He has been working with Progress technologies since Version 6. He works with UNIX platforms dealing with integration and web based applications.

⁹ This is a free to use open source program from Amduus you can use on your systems.

Donations

Do you find something useful in the E-Zine now and then? Do you think it holds value for your education in the 4GL and to learn what is out there?

It does take money to produce this electronic magazine. Sure I can cut corners by not needing paper, ink, or postage – but **bandwidth still costs x amount of dollars every month.**

Even with Linux server, hardware does cost money – and **the server is five years old. It's due for an upgrade.**

Yes, I use OpenOffice.org to edit the document on, but **throw in the laptop and that is a few more dollars.**

Throw in a developer's Progress license – well... we all know how much that puppy is! It sure is useful for writing code with! I would like to get on version 10.

All of the above is going to cost about \$10,000.00 this year. Bet you didn't know it costs so much for a free publication!

We all know there are not that many publications for Progress based technology. You can help yourself, and others, by donating to “the cause.”

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Other Progress Publications Available:

This document focuses on the programming of Progress applications. If you wish to read more business oriented articles about Progress, be sure to see the Profile's magazine put out by Progress software <http://www.progress.com/profiles/>

There are other documents/links available at <http://www.peg.com> .

There is a web ring of sites associated with Progress programming and consultants available at <http://i.webring.com/hub?ring=prodev&id=38&hub> .

White Star Software publishes a commercial document called "Progressions." It is similar to this document but with different content. More information can be found at <http://wss.com/>. White Star also publishes Progress Programming books!

Article Submission Information:

Please submit your article in OpenOffice¹⁰ format or as text. Please include a little bit about yourself for the "About the Author" paragraph.

Looking for technical articles, *marketing Progress* articles, articles about books relevant to programming/software industry, white papers, etc.

Send your articles to sauge@amduus.com!

¹⁰ OpenOffice is a freely available Office Suite for Windows, Apple, and *NIX based operating systems. You can download it at <http://openoffice.org>. This document is edited on OpenOffice on Apple OSX.

Thanks!