Migrating the KAP Forum
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Note: the main purpose of this document is to describe what I had to do to migrate the forum and perhaps make it easier for someone else to do in the future!

Over the last month I have migrated the KAP Forum from its old home hosted by Berkeley (at http://research-benton.ced.berkeley.edu/discuss2/) to its new home hosted by HostPapa (at https://kapforum.org). In the process the forum has moved from Vanilla 2 to Vanilla 3, which entailed a fair mount of rework, though the SQL database which holds the content of the forum (categories, discussions and comments as well as user details) was ported without much difficulty. This document describes the work involved. I should add that though I have more than 50 years programming experience I knew virtually nothing about php (a recursive acronym for **PHP: Hypertext Preprocessor**) which is the scripting language used by Vanilla or about **SQL**, which is the database software used to hold all the content or much about **CSS** (cascading style sheets for HTML) which determine much of the layout of a page. At the age of 79 this old dog is somewhat slower at learning new tricks!

The first task was choosing a web-hosting supplier. I decided on HostPapa because they got good reviews (2nd in the list of recommended 2020 suppliers) but mainly because my old boss at IBM (who knows more about computers than me) switched to them some years ago and has not regretted it. It cost me just over £100 for 3 years hosting with an SSL certificate thrown in.[1]

Once I could logon to HostPapa I used their *softaculous* app to install Vanilla 3. This was very easy and took just a few minutes. Cris had sent me a dump of the SQL database which I then uploaded to the new website and pointed the new Vanilla forum (using the 'keynote' theme) at it. So far so good, but the UI looked **nothing like the old system** – none of the user avatars appeared, the menu bar buttons (e.g. to go to Flickr KAP group) were missing and there were many other differences in appearance.

Most importantly existing user passwords didn't work because Vanilla had changed the hashing algorithm between V2 and V3 so an entered password, when hashed, did not match the V2 hashed version in the database. The system also couldn't send emails when users said they had forgotten their password on sign in. Luckily as admin I could fix most of these problems myself on a piecemeal basis.

The shift from Vanilla 2 to Vanilla 3 was not as straightforward as I had hoped because the 'look and feel' of a Vanilla forum is defined in what Vanilla calls a 'theme' and the internal architecture of a V3 theme (the various php, javascript, css and tpl files) is very different to a V2 theme. Much of the work I had to do involved figuring out just how to implement in the new architecture what was done in the old. It's worth pointing out that Vanilla is **big** – around 5000 files taking up some 65MB of disk space, so I've spent lot of time down rabbit holes trying to figure out how things work.

At this point (end of September 2020) after about one month's work (not full-time, but I guess I've spent at least 100 hours on the task) things are more or less working as before with just a couple of minor issues I haven't so far solved. There's no doubt that someone familiar with php and css would have done the job much quicker.

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[1] This is a special 'starter price' - after 3 years the cost to renew for another 3 years will be much more expensive - around £350.

As well as the editing listed below, I had to fix some issues related to V3 versus V2 changes. For example initially the main page initially only showed 100 pages while there were 203 pages in the old forum. It took posting a query on the (very helpful) open.vanillaforums.com website to discover how to fix this (see below). Here is a list of the main vanilla files I had to adapt or create:

- conf/config.php
- themes/bentonish
- themes/bentonish/KeystoneThemeHooks.php
- themes/bentonish/views/default.master.tpl
- themes/bentonish/design/custom_classic.css
- uploads/userpics
- applications/vanilla/views/discussions/helper_functions.php
- library/Vanilla/Formatting/DateTimeFormatter

I installed Vanilla in a top-level folder I named 'discussion' (it was called 'discuss2' on the Berkeley server) thus forum is accessed as 'https://kapforum.org/discussion'.

Adapting conf/config.php

This file is just a list of configuration definitions. Among the key items I needed to update were:

- lines defining how to access the SQL database (name, host, user and password)
- lines defining how the forum sends emails (host, user and password) – and critically SMTP should not be used
- a line defining the theme to be used ("bentonish")
- the title and description of the home page (appears over the banner)

I also had to add the line:

    $Configuration['Vanilla']['Discussions']['MaxPages'] = 300;

to fix the problem mentioned at the top of this page.

Creating the 'bentonish' theme

I created a copy of the default theme, keynote, and then proceeded to customise it by editing some of its files

Modifying themes/bentonish/KeystoneThemeHooks.php

I added to this file lines defining the extra menu buttons on the ribbon below the banner. By default this has buttons labelled 'Home" on the left and on the right a bell ('notifications'), an envelope ('inbox') a star ('bookmarks') and the signed in user's avatar. The lines I added created buttons for:

- searching the 98/99 archive
- visiting the FLICKR KAP group
- visiting the Ipernity KAP group
- visiting Brooxes.com
- visiting Peter Builts KAP Shop
- visiting Cris Benton's 'Hidden Ecologies' website

Modifying themes/bentonish/views/default.master.tpl

I made a lot of changes to this file which basically describes the layout of a page.
The top of the page contains a banner (what Vanilla calls a 'herobanner'). The old forum had one too but it was implemented in a very different way. One feature of the old banner

was that it cycled through a set of images (long thin slices of KAP photos taken by Cris). To get the new banner to cycle in this way I had to:

Copy the slices from the old forum into a new top level folder
Modify the php program, 'rotate.php', that did the cycling.

As written it cycled the image every time the page was displayed so I modified it so it only cycles at most every 5 minutes. I also had to chop a left-hand chunk off the original images because they had the text "Notes on Kite Aerial Photography' hard-wired into each one.

As well as invoking the added menu defined by KeystoneThemeHooks (see above) I also had to supress some elements and move others around.

Modifying themes/bentonish/design/custom_classic.css

Vanilla uses cascading style sheets file to define the detailed look of the elements making up a page – what font is used, how things are spaced, whether things can expand or contract, whether boxes are drawn round items and so on. I found this hard to do until I discovered the view/developer/inspect elements menu option in the Chrome browser. The problem is that it's not at all obvious which css elements are used to control a particular visible item, like the title of a discussion. Vanilla is a complex piece of software and many key functions are buried deep in the file hierarchy.

Modifying uploads/userpics (avatars)

In the SQL database the rows defining users have a field defining the avatar image to be used. It defines them as being in a folder called 'userpics'. I had to copy that directory from the V2 download Cris gave me into the 'upload' directory at the top level of the discussion hierarchy.

Modifying applications/vanilla/views/discussions/helper_functions.php

Among other things this file contains the 'writeDiscussion' function. I had to make changes to this file so that an entry on the 'Recent Discussions' page looked like this:

5 comments Started by **admin** *September 17 | Last by* **Ningaloo** *October 1* **KAP Gear Sources**

rather than like this:

76 views5 comments most recent by **Ningaloo KAP Gear Sources**

Easy enough to suppress the '76 views', add 'Started by' and change 'Most recent by' to 'Last by' but it took me a long time to discover why there was no date information. It turned out the problem was in the DateTimeFormattter so I ad to make changes there.

Modifying library/Vanilla/Formatting/DateTimeFormatter

To fix the problem of the missing dates I had to comment out the final part of the formatDate function. I never did discover why this was necessary – presumably I had messed up something elsewhere in my editing and this was an unwanted side-effect!