

YAML Based Converter Framework for phpBB.

Introduction and Purpose:-

Currently the converter framework for phpBB uses conversion system targeted to each forum script. To change this a unified easily definable and configurable system is required. Thus this proposal aims to create a unified YAML based converter framework, where conversion rules or definitions as called will be defined in the form of various YAML files.

Common Terms:-

Host:- System being migrated like myBB or Xenforo etc.

Destination:- phpBB

->(Relation):- Shows some relation between the two tables or column, ie copy data.

Eg: uname -> user_name (Host -> Destination copying of all values in that column)

Each configuration file to denote copying of some columns from a host table to the defined columns in some destination table.

Eg Code sample:-

```
$yaml=<<<EOD
table_def:
  table1: xf_users
  table2: phpbb_users
col_def:
- col1: username
  col2: username
  helper_function: demo_func
- col1: user_email
  col2: email
  helper_function: demo_func
```

`EOD;`

Col1,table1 etc represent always the source and col2,table2 represent destination, and are so used for ease of typing, although naming can be changed. All column copying ie conversion definitions have options to specify helper functions which can be used to provide some specific functionality like hashing etc. These special function can be anything from built-in php functions to special set of functions defined as part of our helper class.

The YAML format for defining conversions might be unable to a complete 100% data conversion, as is the case with most converters. Additional routines maybe required with new helper functions defined to enable certain specific conversion cases. My idea is to try and keep the YAML definition as simple but powerful so that it is easy to write quick conversion routines.

YAML config files for conversion will be loaded from a particular directory. So only those files are needed to convert script X to phpBB.

Profile Information (Who am I?):-

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Locale: Mumbai, India (UTC+5.30)

Typical Working hours: [10AM-1PM], [2PM-5PM], [8PM-2AM] (All times in IST, UTC+5.30)

Deliverables (What will we do?):-

Getting Started:-

1. Familiarize oneself with phpBB and few other forum scripts. [Done]
2. Get started with the existing conversion system. [Done]
3. Review task details and make any changes as per mentor before proceeding. [Done]
4. Submit bug-fix/ complete one micro-task to develop better understanding of codebase.[Done]
5. Getting in-depth familiarity with YML and Symfony, and its DBAL for implementing tasks as per project. [WIP]
6. Generate an overview of file structure and organization/hierarchy. [WIP]
7. Keep in mind to make the framework extensible. Provide support for callbacks and events. [WIP, have to decide what events]

Objectives and Implementations:-

1. Initially start development as individual system, which will later be merged within the admin CP and provide a nice UI showing progress and conversions.
2. First create a skeleton file structure and a class diagram to better understand the working of the framework. Create a logging routine.
3. First start out with creating a simple configuration file which can convert all user from Xenforo to phpBB. Test it, validate the data and ensure the phpBB board is able to recognize all the new users. Test the same system now for myBB.
4. In the meantime keep adding any helper function needed and documenting them so as to not forget how things are working.
5. Create configuration scripts for other routines, including forum posts, statistics etc. Verify data integrity at each conversion.
6. Specific helper functions will be needed to implement user-permission and user-roles conversion as each board handles this in a different way. Eg: Xenforo has an isAdmin

field to denote whether user is an Admin. [Will be a difficult task as it is highly dependant on the case].

7. Create a UI to show the progress of conversion and to handle conversions in batches so as to not exceed php execution time limit. Recommend users to run conversion offline and then export the database(maybe)
8. Integrate tool within the adminCP. Generate lock files so that conversion cannot be restarted.
9. [Possible] Add support to resume aborted conversions.
10. Generate appropriate error handling classes and logging classes.

Each step is characterized with bug-tests and bug-fixes before moving on, and thorough discussion with mentor and co-mentor to visualize the idea and move in the right direction.

Communications and Reporting:-

To be in constant touch with mentors and provide them with daily updates. A weekly report and discussion with mentors on current progress and code-review. Engagement with other fellow contributors of the community and other GSOC entrants to be informed and learn more.

The Schedule (When will we do it?):-

<i>Time</i>	<i>Work</i>
May 5 - May 30	Community Bonding Period:- Get more active on IRC, and try to resolve more issues and bugs in other parts of phpBB. Also try to help other students with phpBB basics. Get thorough with phpBB DBAL and migration. Read upon YAML if needed, and check out existing converters. Generate class diagrams and folder structure. Take feedback and advice from mentors. Discuss how to handle user passwords. *(Please see note)
May 30 - Jun 20	Proceed with implementing simple user conversion. Test it and start documenting helper functions. Generate the basic skeleton of the converter framework. Start basic work on conversion of forum posts and threads
Jun 21- Jun 26	Take mentor and community feedback. Testing and bug-fixing to be done. Any incomplete documentation to be added. Packaging this code neatly.
Jun 27- July 12	Work on conversion of threads and forum posts. Add additional helpers and documentation along the way. Test the data thoroughly. By this time a good deal of the backend of the framework would have been completed. Add a control class to control which conversions occur before others. Eg: Users need to be moved before forum posts can be worked on.

July 13 - July 18	Take mentor advice to implement remaining conversions like attachment, statistics, likes etc ie the trivial ones. Discuss how to work with user/group/forum permissions conversion.
July 19 - July 24	Create additional logic for user permissions conversion. This cannot work with just direct copying. Will have to be made script dependant.
July 25- Aug 5	Adjust for any delays if needed. Start work on creating a user interface and integrating the converter framework in the ACP by providing a link for it.
Aug 6- Aug 15	Adjust for any more overflows and delays. Work on pagination and lazy loading of data. Write tests for the converter framework. Also make sure conversions run successfully. Support conversion in batches to not exceed time-limit. Add feature to redirect user to run board statistics update and also provide a downloadable log file.
Aug 15-Aug 21	Run full scale tests and fix any bugs coming along. Take mentor guidance and help for the same. Code to be nicely integrated and packaged. All loose ends to be tied to be fixed.
Aug 21 - Aug 29	Buffer Time. Be active on IRC channels and mailing lists.

Each step involves proper discussions with mentors and proper research before starting out. Discussion to aim to increase knowledge and awareness of the student.

Student to always confirm code as per project standards and will take mentors assistance in the same.

I would write blog posts and forum posts at regular intervals to detail my experience.

***Note:- As per the advice of my mentor and the info given on IRC and Area51 forums, the password manager of phpBB can be used to convert these hashes to a better/more secure format. The password manager sets convert flag for insecure hashes through the check() function and is converted on next login to a better/suitable format. Thus the issue with how to convert passwords can be resolved.**

Personal Objectives:-

After a while with myBB, I really was looking to move to something better, stable and with a more active community and release cycle. phpBB 3.1 also added support for notification and for a responsive design. My only reason for not being able to move was the lack of a converter system for phpBB. phpBB saw a drastic decline on available converters. I wasn't sure I could author one till now where I have taken a DBMS course as part of college and my general knowledge has expanded. This is the reason why I chose this over other projects including Ad-Management and Social Media Sharing. I feel this has been a neglected area, but an important part nonetheless. This framework I hope will lead to quicker development of converters. My other objective is to gain satisfaction by lending my time to the community. It gives me a lot of satisfaction to help a forum project move forward and use technology for the

same because like all of y'all I am a proud forum owner too. To gain a sense of belonging and bonding with the phpBB community and be an active contributor to the same and in future possibly with other open source organizations too. Gain tremendous knowledge from my mentor. Also I plan to migrate my forums to phpBB from Xenforo so both would go hand in hand, and it will be an invaluable experience. It would also make me an active contributor to the community. I also have plans to give talks in the college about Forums, their scope and future and available open source scripts and a quick guide on setting up a forum and plan to use phpBB for the same.

Why phpBB?:-

My first forums called geekytrix launched on phpBB as the forum script. From that point on I found phpBB to be one of the most mature and complete forum packages out there and my relationship with phpBB has been on and off. I have changed board softwares a few times over the years and only stuck to myBB and phpBB. I moved to Xenforo for the availability of responsive themes and a well built notification system. I initially had an older account at phpBB forums and I have generally found the community very helpful and supportive. It has been pleasant on the IRC and a much better experience than with the myBB community where I was helping develop the first fully tableless responsive theme for myBB 1.6 based on bootstrap a couple of years back. One extension I remember is mChat and the new Ajax Shoutbox by paul. Both are excellent and don't have such a strong equivalent in the other open-source scripts.

Educational Qualifications:-

Bachelor of Technology (Information Technology) 2nd Year at Veermata Jijabai Technological Institute, Mumbai

Relevant experiences:-

Task:- 2 GitHub PRs. <https://github.com/balabky9>

Planning to solve more issues on the tracker and being active on the Area51 forums.

Rockmetric (Internship at Bombay Stock Exchange):- Worked as UX and backend engineer. Integrated Mail Chimp API and Net-Core with the product. Ported filtering system to react and all tables to AG-Grid. Extensive experience with AG-Grid a more feature rich version of jsGrid. Some experience with jsGrid as well before its use was discarded. User experience improvements, quality control and testing. Worked with Piwik analytics framework for form-tracking.

Tweakbytes.com:- Founded in 2011, a technical forum which used MyBB. Made switches to SMF and phpBB before finally returning to MyBB. In 2014 moved to XenForo. MyBB version had a lot of core edits, which prevented a smooth upgrade from 1.6 to 1.8 Work included

posting, maintaining and developing the website. AdSense approval in late 2011. Developed one of the first Bootstrap based themes for MyBB 1.6. Formerly GeekyTrix.com

VJTI Alumni Association:- 2013 end-2014:- Maintenance of the old website which was on Wordpress. Custom coded CRUD based admin panel to operate on Life Members. Adding support for online scholarship applications. Developing a jQuery plugin for delayed image loading. Oversaw all technical formalities and live streaming of the Alumni Reunion in 2014,15.

2014 end-Present:- New theme on Wordpress. Site made responsive, with custom compiled Bootstrap. Laravel 5 based new admin panel with support for mass mailing and auto generation of membership nos. Other duties entailed small fixes, posting and uploading of relevant content.

Ecell VJTI :- Maintenance and cosmetic facelift to website. Organized their online aptitude test and wrote a custom script using Google App Engine to correct answers and declare the marks of top contestants. **2015:-** Created a Virtual Stock market application, which delivers updates each second for Wallstreet at Ecell. Was implemented using Laravel, MySQL DB and AJAX based long polling. Currently being implemented with Laravel and ReactDB to support greater number of clients. Also created registration and management system using Excel and VBA.

2016:- Complete blog, website and registration portal for SNC based on Wordpress using a custom Foundation 6 Framework theme.

Geekiest.net:- Guest blogger posting articles on latest technological news.

Techishare.com:- Co-owner with 1/3rd stake.

Designed various websites/application and plugins needed by various associations at the college including the techfest (Technovanza), Entrepreneurship Cell (E-Cell), Cultural (Pratibimb), Magazine (Nirmaan).