MMEDs is a project intended to streamline microbiome data analysis and cross study meta-analysis. The project includes a web application which allows the user to upload metadata and data files and selection an analysis tool to be run (qiime2, SparCC, etc) with only a few clicks. This functionality all currently exists and works with the LSF job queue provided on chimera. A longer term goal is to allow cross study meta analysis. To achieve these MMEDs includes a standardized format for metadata that allows it to be easily parsed into a MYSQL database. Querying that database will allow users to find studies relevant to the questions they are trying to ask.

However MMEDs usefulness has been stalled as there have been a number of issues around making the web application accessible. It was accessible locally on node2-3 prior to the transition from Manda and Mothra to Chimera. While problems during the transition where expected and inevitable, since the transition we have not had a reliable way to access the web application. We thought this was finally resolved in late May when the web services server went live. After some initial difficultlies I was able to modify the MMEDs application to run as a pure WSGI app that the HPC apache server could host. This was working for about a short while before HPC moved the addresses for accessing user websites. Since then I have only gotten a blank page when the app should be running successfully. I first opened ticket #15124 about this issue on June 19th but no progress has been made since then.

Once I have all aspects of my app setup and running properly I receive a blank page at the web address rather than seeing the app. There are no errors displayed when this happens (unlike if I have something broken in the library or the wrong address) and no errors in the log file, only expected logging messages. I have experienced something similar on my personal machine. Usually it occurs after I’ve made a modification to the application. I then need to restart the apache server for the app to start appearing again.

I’ve modified the application so that when it is running on chimera it loads the application library directly from the location of the python source files rather than installing it. I did this so that I wouldn’t have to constantly ask HPC to install new versions every time I made updates. This seemed to be working okay prior to the change from <https://users.hpc.mssm.edu/~wallad07> to [https://wallad07.u.hpc.mssm.edu](https://wallad07.u.hpc.mssm.edu/).

As far as I can tell, since that change I’ve only gotten a blank page. I didn’t realize immediately because my browser seems to have cached most of the pages of the web app and would display them when I accessed it through the bookmark I made. However if I tried to get to pages of the app that weren’t cached, like logging out and logging back in, I’d hit the blank page. It would also fail to record any uploads so I don’t think those pages were really connected to a running instance of the application.

The most recent updates I’ve made locally split the upload processing and job running functionality out from the web application itself. This should reduce load on the server itself and allow the backend to have true parallelism from Python processes rather than Python threads. To achieve this I’ve turned the primary backend process into a Python manager object that connects on localhost:50000. If this port is an issue I can change it. I don’t think this modification is the cause of the blank page issue however as I am still encountering the blank page on my master branch which doesn’t yet contain this update.