

Proposal: Download Usurper

We intend to write a browser plugin for Google Chrome (and Mozilla Firefox, if time permits) that replaces the standard download bar with one that checks the hashes of files before attempting to download them. Furthermore, we will have the downloader send updates of the download hash history to a central server that maintains hash histories for all computers that use the downloader. The central server's main purpose is to maintain a blacklist of file hashes and prevent the clients from downloading known-bad entities. To this end, the server will have to have an interface with clients who report bad files, as well as have a way to intelligently update (likely leaning on some other service, at least at this stage of development), which will allow it to alert the client retroactively if a hash is suddenly known to be bad after having been allowed through.

Timeline

Week 1) Neither of us has written a browser plugin before. To that end, we will have to spend the first week going through tutorials to figure that aspect out. Concurrently, we will have to hammer out implementation details, as we find ways that will be easier to code, or that will make the final product more robust or user-friendly. Also, as a precursor to the actual coding, we will have to make a git or svn repo so that we can work together.

Week 2) By 11/5, we should have enough of an idea how to proceed that we can actually start writing code. We will start with the barest of bones, just to get the proof of concept working, and iteratively add the features in order of importance. Prior to this, we will have to decide on this importance hierarchy, but that will likely have to be determined after we have the skeleton working.

Week 3) The skeleton should be working by 11/12.

Week 4) This will be a week of padding, in case we run into difficulties in any or all of the above steps, so we expect a pretty good skeleton or better by 11/19.

Week 5) That leaves 11/20 through 11/27 to flesh out details and readjust our course, if needed.

Week 6-7) From 11/28 to 12/1, we won't do anything. That leaves 12/2 to 12/8 to finish up our work, and two days to put together a presentation to share with the class.