Disk Usage Plugin: Design Document

Overview

Status: In Progress

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This project aims to make it easier for WordPress administrators to see and understand what is taking up the most disk space with their website.

Context

Goal

To create an easy-to-use plugin to monitor website disk usage.

Problem

1. Viewing the disk usage of a WordPress site is easy, however viewing which individual parts are contributing the most is hard.
2. Many WordPress administrators are not accustomed to more development focused tools, so may find it hard to view this information.

Out of scope

1. Translations into other languages.
2. Multiple representations of the disk usage.
3. File operations in plugin.

Proposed solution

My proposed plugin aims to solve the problem of viewing what exactly is cluttering up their hosting providers space. In order to do this, I am creating a WordPress Plugin, as they have direct access to the site, and can create menus and pages for WordPress administrators easily. This leads to an efficient way for the administrators to view the data and discover potential problems. During the planning stage of this plugin, I took a decent amount of inspiration from programs such as WinDirStat and WizTree, as these are the standard for viewing disk usage on a Windows PC, so they make for great starting points in terms of accessibility on the web. I will be combining PHP, JavaScript, and SQL to create this plugin, with the PHP handling the plugin views, and the custom REST API endpoints, the JavaScript handling the requests to gather disk usage information, along with file tree information, and SQL to handle the storage of job states and any other information that must be non-volatile.

Tasks

- Create a plugin for WordPress, that registers a top-level admin menu.
- Add two pages to this plugin, one to handle settings through either the WP Options API or a custom plugin, and a main screen, to display the results of the scan.
- Ensure that directory tree can be retrieved with multiple workers.

- Create a function that uses multiple workers to retrieve the disk usage of the site.
- Use a combination of JavaScript and CSS to display the results of the scan cleanly on the site.