OCONOMOWOC AREA SCHOOL DISTRICT

Hagen, John <hagenjoh000@stu.oasd.org>

Some Advice for a Coding Project

3 messages

Hagen, John <HAGENJOH000@stu.oasd.org> Thu, Apr 20, 2023 at 9:48 AM
To: Adam Weiss <weissa@oasd.org>

I just got back from the FBLA state coding competition. The goal for the competition was to make a tool to track student involvement at school activities. I made a website which has a page for scanning student IDs as they enter an event, a report page to view statistics from attendance, and an admin page. One area I didn't score so well on was a backup feature. As I'm going to nationals this summer, I wanted to ask your advice as to how as an IT department you would implement backups for a hosted website such as this.
If you did use a tool like this, would you want the backup store on an external media? An external server? A paid service?

Thank you for all of your help

--
John Hagen
hagenjoh000@stu.oasd.org
OASD Technology Intern

Weiss, Adam <weissa@oasd.org> Mon, Apr 24, 2023 at 10:06 AM
To: "Hagen, John" <HAGENJOH000@stu.oasd.org>
Cc: Ryan Altschwager <AltschwR@oasd.org>

Hey Jack,

I'm CCing Ryan since he might have additional/better ideas. But from a business perspective we use a 3-2-1 strategy common with data back up. This means 3 copies of your data, the original, a back up copy, and then a 2nd back up located off site from the other copies. We use a pay for product and have it located at another site for the 1st copy, and then utilized archive copies on hard drives that we store completely off site.

For your setup, are you running the server that is hosting the website? Or are you using a 3rd party to host it? If you're using a 3rd party a lot of them have plugins that work with their platform to create backups of your information and database. If you're hosting it then it might be best to use a server back up tool to create a complete backup of the system. Maybe utilize VMware for the server and create back up copies of the server. I think your answers to the first two questions will narrow down the options.

Thanks,
Adam
[Quoted text hidden]

Altschwager, Ryan <AltschwR@oasd.org> Mon, Apr 24, 2023 at 10:59 AM
To: "Weiss, Adam" <weissa@oasd.org>
Cc: "Hagen, John" <HAGENJOH000@stu.oasd.org>

Adam called it on the 3-2-1 strategy.

It might look something like this:

1. Set this product's backup schedule to create a backup of the data at x intervals. The backup file could be a csv file containing all the data and server settings, depending on what's in it, it should be encrypted.
2. Determine where you would like the output file to be created. It should be an automated process, not just on demand.

3. Use a tool to copy that file to another spot for archiving or a cloud solution. Note to user: Make sure that a copy of the file is geolocated outside of the running system after backup.
4. Clean up the backups that are outdated so they don't grow out of control.

You would then need to make a restore function to pull a csv back in, and decide what to do with data in the system already. Does the restore blow away existing data or add to it? Is that an end user option? Can we restore settings and data independently?

We set the apps to back up on their own drives, then backup the whole virtual machine nightly (IT Admin's want lots of backups). We can just restore the whole machine instead of figuring out what went wrong in the application.

With an internally hosted product, you should assume the person may be running your product on a bare metal OS install or workstation (virtual machine backup isn't an option), so it should have a mechanism (FTP, SFTP, copy to network share) to get the backup off the host. On the cloud, you're going to have to download or get another cloud solution involved.

Let me know if you have questions or need more specific info.

Thanks,
Ryan
[Quoted text hidden]