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Cloud task 3

After implementing task 1 in AWS and Azure I found them to be similar overall. The api used to create and manage data on their respective servers was easy to use and well documented online. When it came to AWS I found their documentation more consistent than Azure. This usually wasn’t a problem but sometimes tripped me up when I followed a guide on Azure that used a different setup process which then wouldn’t work with what I had. Overall, I found implementing task 1 easier in AWS and when it came to task 2 it was significantly easier to follow the AWS documentation. Another aspect I liked about AWS is that it wouldn’t throw an exception if a bucket already existed when I tried to create it and would just return a reference to it, same went for file upload. Azure would just throw an error and then I would have to retrieve it myself. I can see this being an issue in some cases though as you could accidently overwrite files if their existence wasn’t checked before hand. Now for the parts of Azure as I did like, I found it to be generally faster when performing actions such as creating and getting resources. I ran a few tests (below) and even for a simple query to get files it was significantly faster even though both servers are in the US East region. Another thing I liked was about the actual Azure education account and how it worked vs the AWS education account. With Azure I can just log in to the normal portal and access service. AWS on the other hand forces me to go to the AWS education page, sign in, go to aws account and click on educate start account, then go then click on the AWS console button. Also, I get kicked off every 3 hours and had to input a new connection key to my dev environment. So, in this sense Azure is much less annoying plus I got $260 in credits vs $100 in AWS. Overall I preferred using AWS as I found it more straight forward and easier to debug since I found more on stack overflow and wasn’t confused by conflicting guides.

Performance Results

|  |  |  |
| --- | --- | --- |
|  | AWS | Azure |
| Create file containers | 2.4s | 0.7s |
| Upload all files | 12.1s | 9.9s |
| List all files | 2.1s | 0.9s |
| List files in cis1300nolan | 0.3s | 0.4s |
| Search for all files containing lecture2 | 2.7s | 0.9s |

TODO

Sources I used:

AWS

<https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/index.html>

<https://github.com/awsdocs/aws-doc-sdk-examples>

Azure

<https://pypi.org/project/azure-cosmos/?fbclid=IwAR0_KFgPFAn7jyBNg4mYM7JFqwE-2khDvJzbfpm8ctz47rK7SOR4ldBxX9g> (This one worked the best for me)

<https://docs.microsoft.com/en-us/python/api/azure-cosmos>

<https://docs.microsoft.com/en-us/azure/cosmos-db/create-sql-api-python>