Post-Completion

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CPSC 253

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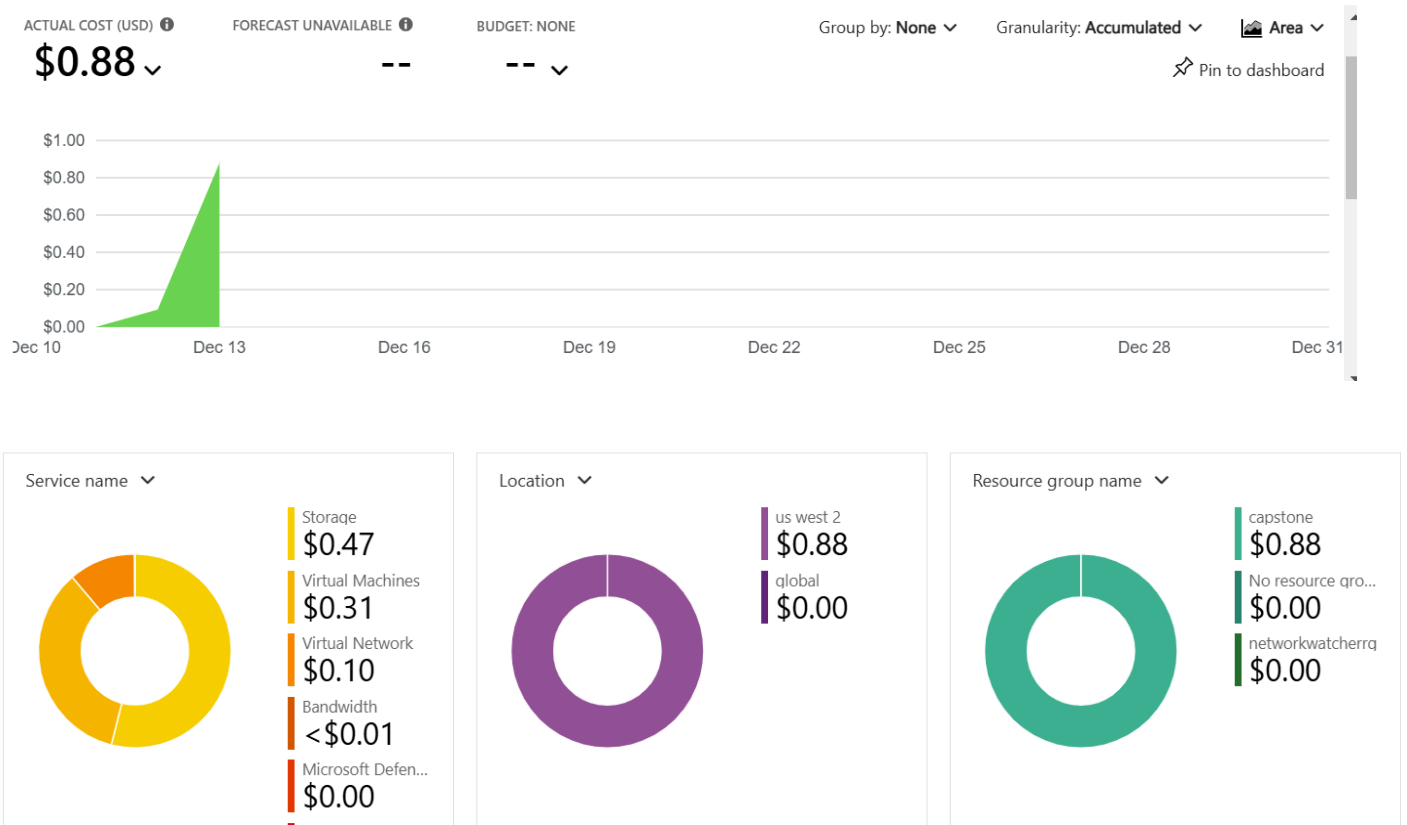
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The purpose of this project is to migrate three VMs to a cloud server. We chose Azure, and the VMs included Kali Linus VM, Metasplotble VM, and Windows Server 2022 VM. We used tools like Nessus to scan for vulnerabilities and Microsoft Entra to connect the AD. We successfully migrated our Windows Server VM to Azure—other steps involved hardening our VM security, such as firewalls.

Azure Setup

- Created an Azure Student Account

- Created a Microsoft Entra ID

- Set up a free trial subscription in Azure

- We couldn't use the Azure student account because the school admin blocked it, so we set up a personal account through Entra.

- Configured Azure Virtual Network

- Created a new Windows Server 2022 in Azure cloud through Microsft Entra

- Configured VM size and all admin credentials

We planned to migrate the Kali and Metasploit VMs as well, but we struck a dead end. Our cost analysis is:

ACTUAL COST (USD) ⓘ   FORECAST UNAVAILABLE ⓘ   BUDGET: NONE   Group by: **None** ⌄   Granularity: **Accumulated** ⌄   📈 Area ⌄

$0.88 ⌄   --   -- ⌄   📌 Pin to dashboard

Service name ⌄		Location ⌄		Resource group name ⌄	
Storage	$0.47	us west 2	$0.88	capstone	$0.88
Virtual Machines	$0.31	global	$0.00	No resource gro...	$0.00
Virtual Network	$0.10			networkwatcherrg	$0.00
Bandwidth	<$0.01				
Microsoft Defen...	$0.00				

Some Challenges we encountered included dealing with our account being disabled, so we could not log in via RDP, adjusting multiple policies, and managing Azure free credits to ensure we were not exceeding the limit. In the end, we were able to successfully migrate the Windows Server 2022 VM to the Azure cloud with every function available as in the original.

Some lessons we learned from this include planning and preparation. We were unprepared for this project and did not plan at all. This is partially why we struggled so much during this entire process. We also learned to manage our Azure credits, even though we didn't use a lot of it, but we learned to avoid going over the limit. We also learned how to configure our VM security and how implementing them can mitigate any vulnerabilities. In the future, if we can, we would like to extend the migration process to our other two VMs as we believe we can learn much more throughout the process.