Q1.a

Based on the case study, it is recommended that Baker Botts L.L.P should use the IaaS service model.

The reason is because the IaaS model provides the user full control of their computational resources allocation. They are able to configure their RAM, CPU, Storage, and network bandwidth as needed. While it is not explicitly stated that the firm requires full customization ability. Their needs to list out specific requirements for their instances such as “requiring an instance (with 4 CPUs, 16GB RAM, 1 TB Storage, 5GB Network Bandwidth)” strongly suggest a need for full capability in resources allocation and customisation. Hence, Iaas is the appropriate service model.

It is suggested that they should use the cloud deployment model.

The reason is because it was stated within the case study the American law firm has “12 branches across North America, Europe, and Asia. It has approximately 725 lawyers”, with the addition of the cost concern. So it is impractical to believe that other deployment models, such as On-premises or hybrid, would seamlessly support the wide scale of users across multiple regions without the future problems of added increasing complexity, cost and restricted expansion.

Public cloud deployment model allows the user to be at any part of the world and still be able to use the service that is offered. While also reduces expenses that are needed while still providing the same service at the benefit flexible scaling, taking into the account of potential future growth. Hence, cloud deployment is a more suitable choice

Q1.b

Within the case study, there are several key needs and concerns that are stated:

- The business wants to move their website to the AWS Cloud
- The business needs a service that would help them run instances with the require specification
- The business wishes to understand the cost of the services being given to
- The business wants to ensure the availability is high, and the latency is low

Services that are recommended are:

- **EC2:** EC2 provides the business a way to create instances that match their required specifications across the countries. EC2 services are stated by Amazon as flexible, and scalable. This means that it can be adjusted based on the future growth of the business

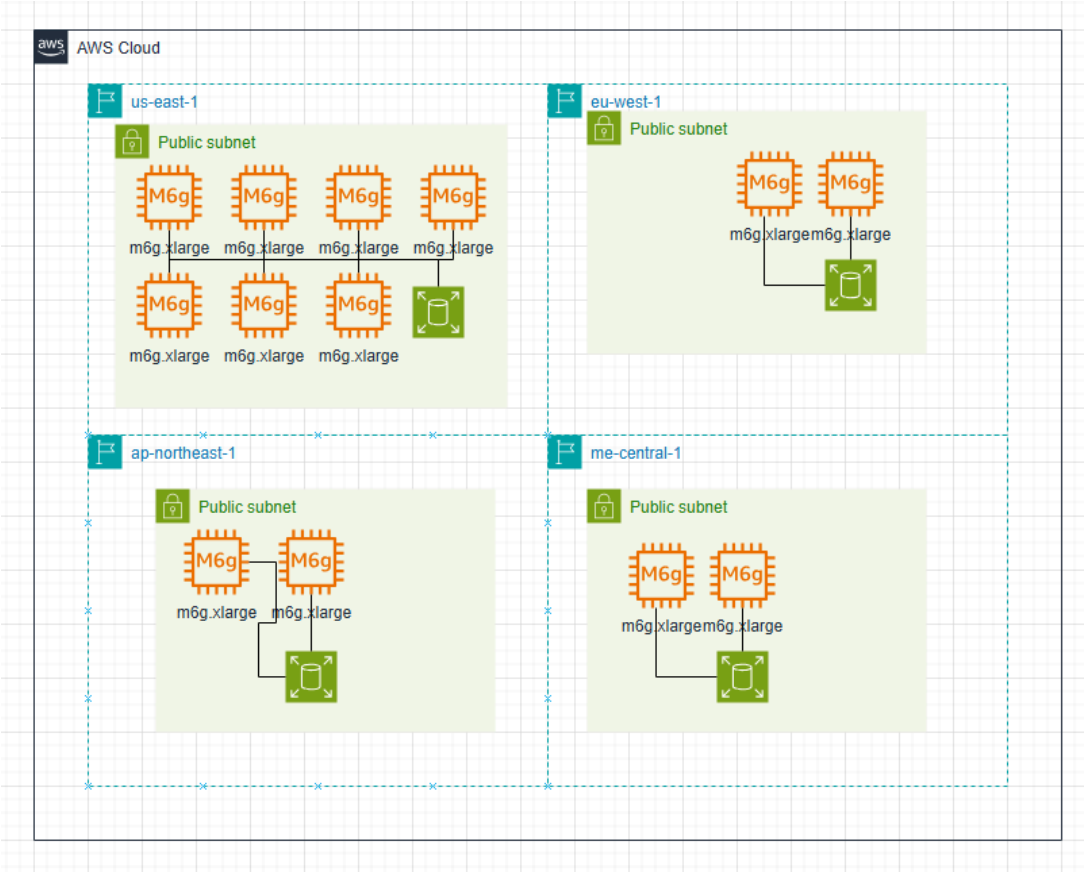
- **S3:** While S3 is a cloud storage service. S3 also has a side feature for static website hosting. It fits into the business’s needs in that it is cheap, easy, and simple to set up. While it doesn’t support PHP or Python, it doesn’t need to. The business stated that they would like to host their static website on a AWS web service, while also raising

concern about the cost management of the business. This service offers an appropriate middle ground in that it is the most cost-effective choice.

- **Amazon Cloudfron**t: In order for a user to see contents at a quick speed, Amazon Cloudfront relies on a technique in which it distributes the content first to data centers around the world, referred to as edge locations. When a user requests to see the content. Cloudfront searches for the nearest edge location and displays the content from there. Resulting in instantaneous content delivery. This is applicable to the business in that it is stated the business span across many countries, and wish to reduce the latency. Applying this service would reduce it significantly.

- **Cost Explorer:** One of the main concerns of the business is the cost of these services. In order to resolve this issue, Baker Botts can use the Amazon Cost Explorer Service, as it provides a visual representation. Helping the business to analyzes and keep track of the usage

Q1.c



Q1.d

1.

Lowest total estimation of all services equals $7086 USD per year. Which is $590 USD per month.

EC2: $586 per month

S3: $0.23 per month
CloudFront: $4.25 per month
CostExplorer: Free

https://calculator.aws/#/estimate?id=313821b71312716eec7b1c03f1c5fff72a59cca5

This is the minimum cost for all services listed combine

2.

There are additional cost that are recommended for Baker Botts law firm such as
AWS Support Plan
AWS Backup

Q2.a

In order to secure Bendigo bank's data. Two solutions can be used to monitor and control the access of users on which resources. The two solutions are IAM and CloudTrail

IAM is an appropriate security solution in that it acts as policy enforcer controlling users, groups, or role on what type of data they have access to and which data are refrained from getting accessed to certain people. This is crucial because BendigoBank is a business that handles their clients' personal and sensitive content, Including card numbers, login information and so on. By implementing this security measure, it reduces a lot of risk otherwise would be imposed upon the business.

CloudTrail is another appropriate choice in which it records and logs user activities and behaviours across the cloud. In case if a breach of data ever happen, CloudTrail aids in finding and narrowing down what or who is the cause of breach. This can help businesses like Bendigo Bank to further find and patches up holes in their security wall.

Q2.b

The best practice for this project is to abide by the principle of least privilege. Each group will have their own assigned role, permission, and resources that they can use or alter in a limited scope. For example:

- **Project managers** will have access to resources such as billing files, and reports. They are only allowed read on access without the possibility of changing the content of the resources
- **Database administrators** will possibly have access to database related services such as AWS RDS and other services and programs. They are allowed to both read, write and execute within their own parameter
- **Network engineer** will have access to network related stuff and are allowed to do configuration within their own environment
- **Application developers** will have access to tools such as EC2, and some kind of IDEs or text editor. They are permitted to read, write and execute within their own parameter

- **Testers** will be granted read-only or limited write access to testing environments, including access to logs and application builds for validation purposes.

Q2.c

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