

## Tugas 1 Komputasi Awan

Developer want to create a web application with an Amazon RDS-hosted database in the US East (Ohio) Region. The requirement specification is the follow:

Service	Data Required
<b>Amazon Elastic Compute Cloud (Amazon EC2)</b>	<ul style="list-style-type: none"> <li>Two Linux t3.2xlarge instances</li> <li>1-Year Standard Reserved billing with no upfront costs</li> </ul>
<b>Amazon Simple Storage Service (Amazon S3)</b>	<ul style="list-style-type: none"> <li>100 GB per month S3 Standard storage</li> <li>10,000 PUT, COPY, POST, or LIST requests</li> <li>5,000 GET, SELECT, and other requests</li> <li>1 GB data returned by S3 Select</li> <li>10 GB data scanned by S3 Select</li> </ul>
<b>Elastic Load Balancing</b>	<ul style="list-style-type: none"> <li>Three Application Load Balancers</li> <li>Average of 50 new connections/second per Application Load Balancer</li> <li>Average connection time is 60 seconds</li> <li>Average of 100 requests per second for each Application Load Balancer</li> <li>Processed bytes per Application Load Balancer for EC2 instances and IP address as targets is 100 GB/month</li> <li>10 average number of rule evaluations per request</li> </ul>
<b>Amazon Route 53</b>	<ul style="list-style-type: none"> <li>5 hosted zones, not using traffic flow</li> <li>10 million standard queries per month</li> <li>10,000 basic Domain Name System (DNS) health checks within AWS</li> <li>20,000 basic DNS health checks outside of AWS</li> <li>10 elastic network interfaces</li> <li>2 million recursive average DNS queries per month</li> </ul>
<b>Amazon Relational Database Service (Amazon RDS)</b>	<ul style="list-style-type: none"> <li>2 RDS db.r5.8xlarge standard instances that run MySQL</li> <li>100 GB of General Purpose storage</li> <li>30 GB additional backup storage</li> </ul>

### Amazon EC2:

Berdasarkan spesifikasi yang diberikan yaitu 2 Linux t3.2xlarge instances dengan 1 year standard reserved bill tanpa upfront costs, biaya untuk Amazon EC2 adalah 304.56 USD/bulan.

### Amazon S3:

Berdasarkan spesifikasi yang diberikan yaitu 100 GB/month S3 standard storage; 10000 PUT, COPY, LIST requests; 5000 GET, SELECT, and other requests; 1 GB data returned by S3 select; dan 10 GB data returned by S3 select, biaya untuk Amazon S3 adalah 2.37 USD/bulan.

## Elastic Load Balancing:

The screenshot shows the AWS Elastic Load Balancing configuration page for Application Load Balancers. It includes sections for selecting load balancer type (Application Load Balancer selected), service settings (3 Application Load Balancers), and detailed configuration fields for dimensions like processed bytes, average connections, and rule evaluations. The total monthly cost is listed as \$84.31 USD.

**Service settings**

Number of Application Load Balancers: 3

**Load Balancer on Outposts**

ALB on Outposts is a fully managed and secure request level (Layer 7) load balancing service that automatically distributes incoming (HTTP/2) traffic across multiple targets, such as Amazon EC2 instances, containers, and IP addresses. Within Outposts, ALB will operate in a single subnet and will scale automatically up to the capacity available on the network interface card (NIC). This allows you to take advantage of the low latency and high bandwidth of your Amazon Virtual Private Cloud (VPC) and provides robust security features like integrated certificate management and TLS offload.

**Dimensions**

- Processed bytes (Lambda functions as targets): Value: Enter amount (100), Unit: GB per hour (GB per hour)
- Processed bytes (EC2 Instances and IP addresses as targets): Value: 100, Unit: GB per month (GB per month)
- Average number of new connections per ALB: Value: 50, Unit: per second (per second)
- Average connection duration: Value: 60, Unit: seconds (seconds)
- Average number of requests per second per ALB: Value: 100
- Average number of rule evaluations per request: Value: 10

**Total Upfront cost: 0.00 USD**   **Total Monthly cost: 84.31 USD**   **Show Details**   **Cancel**   **Update**

Berdasarkan spesifikasi yang diberikan yaitu 3 Application Load Balancers, average of 50 new connections/second per Application Load Balancers, average of 60 seconds connection time, average of 100 requests per second for each Application Load Balancer, 100 GB/month processed bytes per Application Load Balancer for EC2 instances and IP Address as targets, dan 10 average number of rule evaluations per request, biaya untuk Elastic Load Balancing adalah 84.31 USD/bulan.

## Amazon Route 53:

The screenshot shows the AWS Route 53 configuration page for Hosted Zones. It includes sections for hosted zones, traffic flow, and various query types. The total monthly cost is listed as \$20,894.80 USD.

**Hosted Zones**

Additional Records in Hosted Zones: Enter the sum of RRSets records in excess of 10K in each zone. See examples in the info box. Enter the sum of RRSets records in excess of 10K in each zone.

**Traffic Flow**

Standard queries: Value: 10, Unit: million per month (million per month)

Latency based routing queries: Enter query amount (Enter query amount)

Geo DNS queries: Enter query amount (Enter query amount)

IP-based routing queries: Enter query amount (Enter query amount)

IP (CNAME) blocks: No fees are charged for storage of up to 1,000 IP blocks. Enter the amount (Enter the amount)

**Total Upfront cost: 0.00 USD**   **Total Monthly cost: 20,894.80 USD**   **Show Details**   **Cancel**   **Update**

DNS Failover Health Checks for endpoints [Info](#)

Basic Checks Within AWS  
10000

Basic Checks Outside of AWS  
20000

HTTP Checks Within AWS  
[Enter the amount](#)

HTTP Checks Outside of AWS  
[Enter the amount](#)

String Matching Checks Within AWS  
[Enter the amount](#)

String Matching Checks Outside of AWS  
[Enter the amount](#)

Fail Interval Checks Within AWS  
[Enter the amount](#)

Fail Interval Checks Outside of AWS  
[Enter the amount](#)

Latency Measurement Checks Within AWS  
[Enter the amount](#)

Latency Measurement Checks Outside of AWS  
[Enter the amount](#)

[Show calculations](#)

Route 53 Resolver [Info](#)

Number of Elastic Network Interfaces  
10

Recursive average DNS queries  
2 [Unit](#) [millions per month](#)

[Show calculations](#)

Total Upfront cost: 0.00 USD Total Monthly cost: 20,894.80 USD [Show Details](#) [Cancel](#) [Update](#)

Berdasarkan spesifikasi yang diberikan yaitu 5 hosted zones without traffic flow, 10 million standard queries per month, 10000 basic DNS health checks within AWS, 20000 basic DNS health checks outside of AWS, 10 elastic network interfaces, dan 2 million recursive average DNS queries per month, biaya yang dibutuhkan untuk Amazon Route 53 adalah 20894.80 USD/month.

### Amazon RDS for MySQL:

Nodes  
Enter the number of DB instances that you need.  
2

Q db.r5.8xlarge [X](#)

Selected Instance:  
**db.r5.8xlarge**  
vCPU: 32  
Memory: 256 GiB

Utilization (On-Demand only)  
With utilization, you still have to stop the instance to get the cost benefit. Utilization only affects OnDemand pricing for instances and not the storage, backups, etc.  
Value: 100 Unit: %Utilized/Month

Deployment option: Multi-AZ

Pricing model: OnDemand

Total Upfront cost: 0.00 USD Total Monthly cost: 12,546.45 USD [Show Details](#) [Cancel](#) [Save and view summary](#) [Save and add service](#)

Storage [Info](#)  
Storage for each RDS instance: General Purpose SSD (gp2)

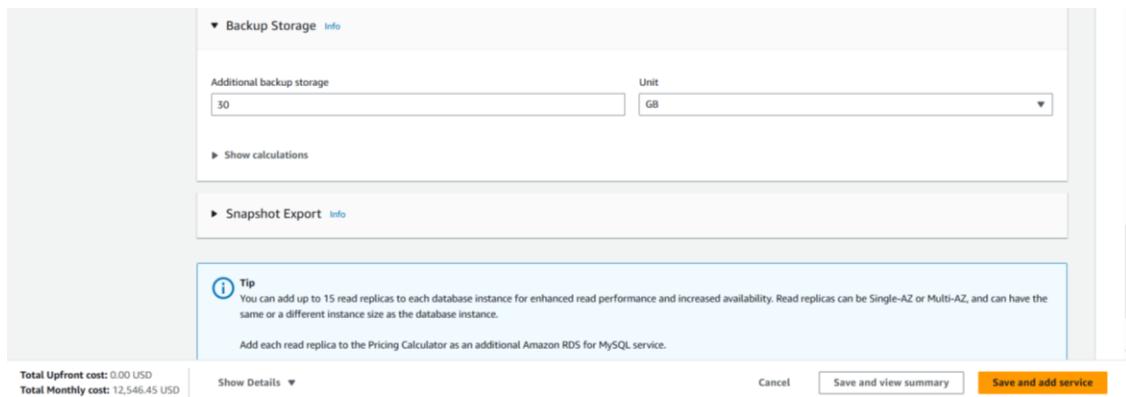
Storage amount: 100 Unit: GB

[Show calculations](#)

▼ CloudWatch Database Insights Pricing for RDS Provisioned Instances [Info](#)

Would you be enabling Database Insights with the database?  
Yes

Total Upfront cost: 0.00 USD Total Monthly cost: 12,546.45 USD [Show Details](#) [Cancel](#) [Save and view summary](#) [Save and add service](#)



Berdasarkan spesifikasi yang diberikan yaitu 2 RDS db.r5.8xlarge standard instances that run MySQL, 100 GB of General Purpose storage, dan 30 GB additional backup storage, biaya yang dibutuhkan adalah 12546.45 USD/month

Total cost:

Setelah dijumlahkan, biaya yang dibutuhkan oleh developer adalah 33842.49 USD/bulan atau 405989.88 USD/tahun.



Contact your AWS representative: [Contact Sales](#)

**Export Date:** 09/03/2025

**Language:** English

[Estimate url](#)

### Estimate summary

Upfront cost	Monthly cost	Total 12 months cost
0.00 USD	33,832.49 USD	405,989.88 USD Includes upfront cost

### Detailed Estimate

Name	Group	Region	Upfront cost	Monthly cost
Amazon EC2	-	US East (Ohio)	0.00 USD	304.56 USD
<b>Status</b>	-			
<b>Description:</b>	-			
<b>Config summary</b>	Tenancy (Shared Instances), Operating system (Linux), Workload (Consistent, Number of instances: 2), Advance EC2 instance (t3.2xlarge), Pricing strategy (1yr No Upfront), Enable monitoring (disabled), DT Inbound: Not selected (0 TB per month), DT Outbound: Not selected (0 TB per month), DT Intra-Region: (0 TB per month)			
Amazon Simple Storage Service (S3)	-	US East (Ohio)	0.00 USD	2.37 USD
<b>Status</b>	-			
<b>Description:</b>	-			
<b>Config summary</b>	S3 Standard storage (100 GB per month), PUT, COPY, POST, LIST requests to S3 Standard (10000), GET, SELECT, and all other requests from S3 Standard (5000), Data returned by S3 Select (1 GB per month), Data scanned by S3 Select (10 GB per month)			
Elastic Load Balancing	-	US East (Ohio)	0.00 USD	84.31 USD
<b>Status</b>	-			
<b>Description:</b>	-			
<b>Config summary</b>	Number of Application Load Balancers (3)			
Amazon Route 53	-	US East (Ohio)	0.00 USD	20,894.80 USD
<b>Status</b>	-			
<b>Description:</b>	-			
<b>Config summary</b>	Hosted Zones (5), Basic Checks Within AWS (10000), Number of Elastic Network Interfaces (10)			
Amazon RDS for MySQL	-	US East (Ohio)	0.00 USD	12,546.45 USD
<b>Status</b>	-			
<b>Description:</b>	-			
<b>Config summary</b>	Storage amount (100 GB), Storage for each RDS instance (General Purpose SSD (gp2)), Nodes (2), Instance type (db.r5.8xlarge), Utilization (On-Demand only) (100 % Utilized/Month), Deployment option (Multi-AZ), Pricing strategy (OnDemand), Additional backup storage (30 GB)			

### Acknowledgement

AWS Pricing Calculator provides only an estimate of your AWS fees and doesn't include any taxes that might apply. Your actual fees depend on a variety of factors, including your actual usage of AWS services. [Learn more](#)