



# **Small Project 2**

# **Membangun Infrastruktur**

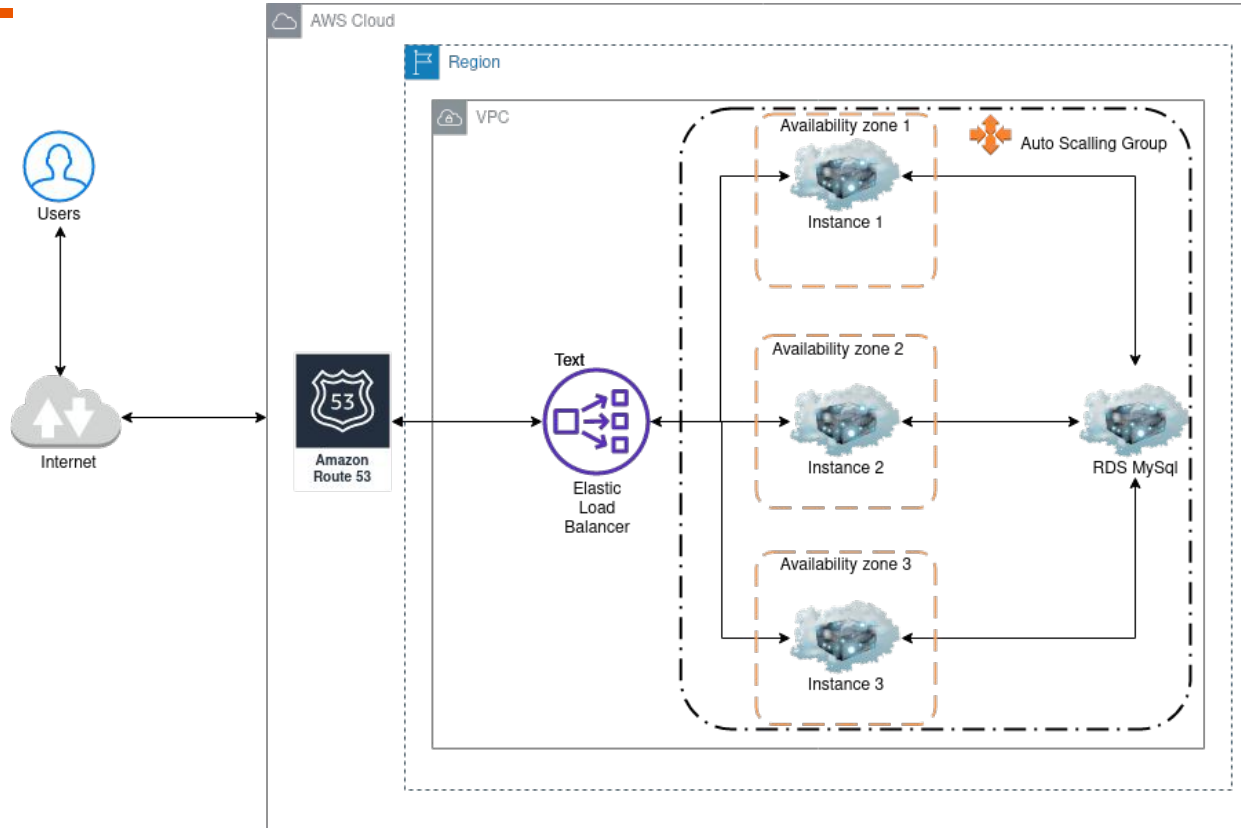
# **Berbasis Cloud**

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## **Background & Goal**

Perusahaan Gawai studio sedserverang mengalami peningkatan layanan, selama 5 tahun terakhir perusahaan hanya menggunakan layanan server on premises, sehingga akan melakukan migrasi ke sistem cloud, karena penggunaan yang meningkat. Kita akan membuat infrastruktur berbasis cloud sesuai requirement yang diperlukan.

# Topologi Infrastruktur Cloud



# Budgeting



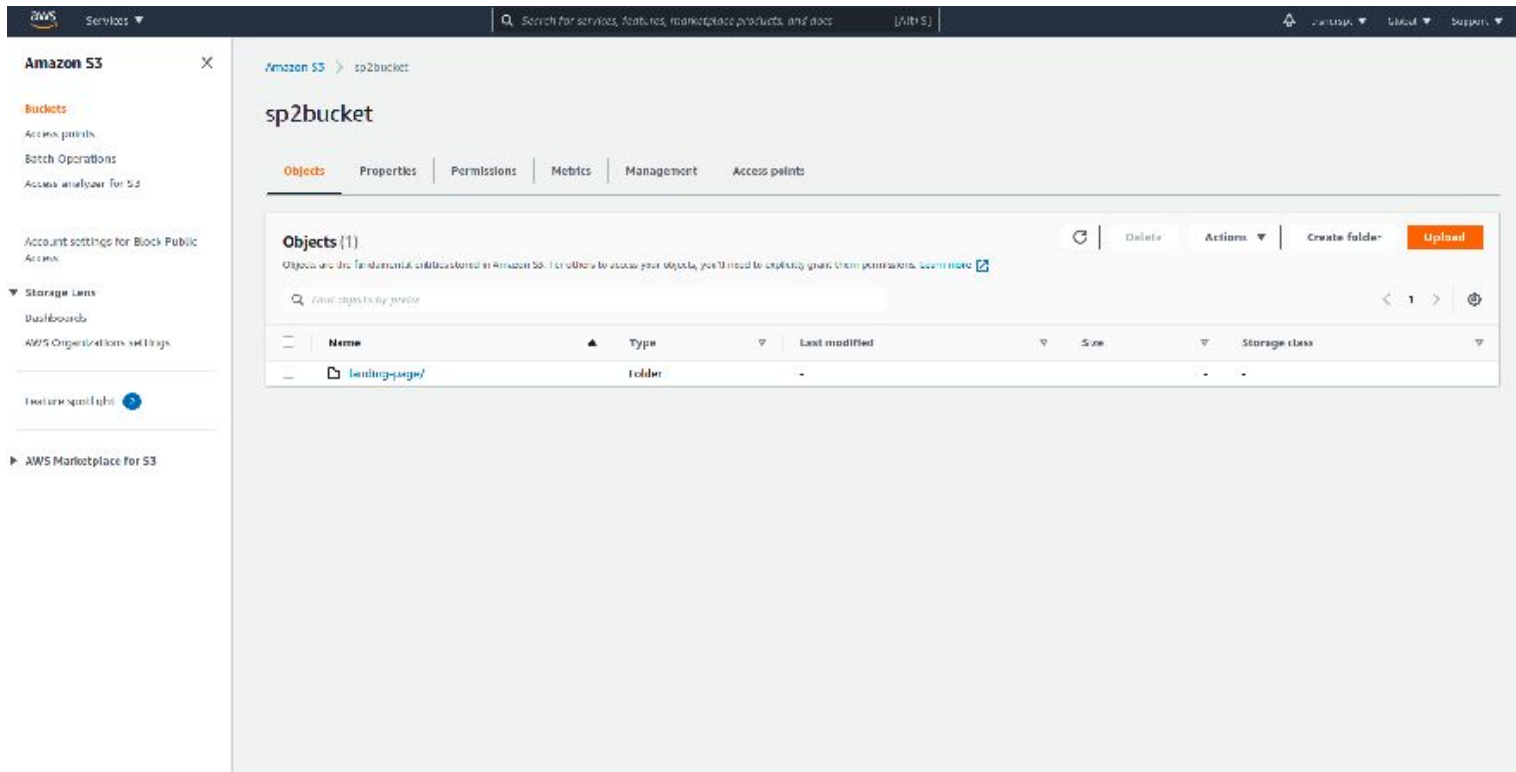
SERVICE	Specifications	Price/Month
<b>Amazon EC2</b>	Operating system (Linux), Quantity (1), Pricing strategy (EC2 Instance Savings Plans 1 Year No Upfront), Storage amount (30 GB), Instance type (r6g.medium)	26.21 <u>USD</u>
<b>Amazon RDS for MySQL</b>	Quantity (1), Pricing strategy (Standard Reserved Instances 1 Year No Upfront), Storage for each RDS instance (General Purpose <u>SSD</u> (gp2)), Storage amount (30 GB), Instance type (db.t3.micro)	19.11 <u>USD</u>
<b>Amazon Elastic IP</b>	Number of EC2 instances (3), Number of <u>EIPs</u> per instance (3)	21.90 <u>USD</u>
<b>Elastic Load Balancing</b>	Number of Classic Load <u>Balancers</u> (1), Processed bytes per <u>CLB</u> (3 GB per hour)	37.96 <u>USD</u>
<b>Amazon Route 53</b>	Hosted Zones (1)	52.20 <u>USD</u>

# VPC

The screenshot shows the AWS Management Console interface for the VPC Subnets page. The top navigation bar includes the AWS logo, a search bar, and various navigation links. The left sidebar contains a list of services, with 'VPC' selected. The main content area displays a table of subnets with the following columns: Name, Subnet ID, State, VPC, IPv4 CIDR, Available IPv4, IPv6 CIDR, Availability Zone, and Availability. The subnets listed are:

Name	Subnet ID	State	VPC	IPv4 CIDR	Available IPv4	IPv6 CIDR	Availability Zone	Availability
subnet-az-3	subnet-041f0dc3e37030f4	available	vpc-060359218ddde4441 ...	10.0.3.0/24	251	-	ap-southeast-2c	apse2-a
subnet-az-1	subnet-046e7fc73dcd3ab11	available	vpc-060359218ddde4441 ...	10.0.1.0/24	251	-	ap-southeast-2a	apse2-a
subnet-az-2	subnet-0ef2dddb958bbc77	available	vpc-060359218ddde4441 ...	10.0.2.0/24	251	-	ap-southeast-2b	apse2-a
subnet-2c62ae4a	subnet-2c62ae4a	available	vpc-e741a581	172.31.0.0/20	4090	-	ap-southeast-2b	apse2-a
subnet-68106e30	subnet-68106e30	available	vpc-e741a581	172.31.16.0/20	4091	-	ap-southeast-2c	apse2-a
subnet-76d42d3e	subnet-76d42d3e	available	vpc-e741a581	172.31.32.0/20	4091	-	ap-southeast-2a	apse2-a

# Bucket S3 & Landing Page



The screenshot displays the AWS Management Console interface for an Amazon S3 bucket named 'sp2bucket'. The left-hand navigation pane shows the 'Amazon S3' service selected, with sub-options like 'Buckets', 'Access points', and 'Batch Operations'. The main content area shows the bucket's details, including tabs for 'Objects', 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access points'. The 'Objects' tab is active, showing a list of objects. There is one object, 'landing-page/', which is a folder. The console also includes a search bar at the top and a sidebar with various AWS services and features.

**Amazon S3** ×

- Buckets**
- Access points
- Batch Operations
- Access analyzer for S3
- Account settings for Block Public Access
- Storage Lens**
- Dashboards
- AWS Organizations settings
- Feature spotlight ➔
- AWS Marketplace for S3

Search for services, features, marketplace products, and docs [Alt+S]

Amazon S3 > sp2bucket

## sp2bucket

**Objects** Properties Permissions Metrics Management Access points

**Objects (1)** 🔄 Delete Actions ▼ Create folder Upload

Objects are the fundamental units stored in Amazon S3. For others to view your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Last modified	Size	Storage class
📁 landing-page/	folder	-	-	-

# Instance

The screenshot shows the AWS Management Console for the 'ap-southeast-2' region. The left sidebar contains navigation links for various AWS services, including EC2 Dashboard, Events, Tags, Limits, Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, Elastic Block Store, and Network & Security. The main content area displays a list of EC2 instances. The instance 'instances-az1' is selected, and its details are shown below the list.

**Instances (1/5)**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
-	i-0f9e90a204861eceb	Terminated	t2.micro	-	No alarms
instances-az2	i-0dccc099acb9fa38fc	Running	t2.micro	2/2 checks ...	No alarms
instances-az3	i-0543d7b0a365376c2	Running	t2.micro	2/2 checks ...	No alarms
-	i-0c899ec6c497970fd	Running	t2.micro	2/2 checks ...	No alarms
<b>instances-az1</b>	<b>i-00c9d90e6afad7251</b>	<b>Running</b>	<b>t2.micro</b>	<b>2/2 checks ...</b>	<b>No alarms</b>

**Instance: i-00c9d90e6afad7251 (instances-az1)**

**Details** | Security | Networking | Storage | Status Checks | Monitoring | Tags

**Instance summary**

Instance ID	Public IPv4 address	Private IPv4 addresses
i-00c9d90e6afad7251 (instances-az1)	3.25.206.172   <a href="#">open address</a>	10.0.1.4
Instance state	Public IPv4 DNS	Private IPv4 DNS
Running	-	ip-10-0-1-4.ap-southeast-2.compute.internal
Instance type	Elastic IP addresses	VPC ID
t2.micro	-	vpc-060359218ddde4441 (indra-vpc)
AWS Compute Optimizer finding	IAM Role	Subnet ID
-	-	-

# Mounting S3

```
25 packages can be updated.
0 updates are security updates.

New release '20.04.1 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

*** System restart required ***
Last login: Thu Jan 21 10:43:37 2021 from 180.245.107.48
ubuntu@ip-10-0-2-86:~$ sudo apt-get install s3fs
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  s3fs
0 upgraded, 1 newly installed, 0 to remove and 25 not upgraded.
Need to get 200 kB of archives.
After this operation, 557 kB of additional disk space will be used.
Get:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu bionic/universe amd64 s3fs amd64 1.82-1 [200 kB]
Fetched 200 kB in 0s (16.2 MB/s)
Selecting previously unselected package s3fs.
(Reading database ... 85879 files and directories currently installed.)
Preparing to unpack .../archives/s3fs_1.82-1_amd64.deb ...
Unpacking s3fs (1.82-1) ...
Setting up s3fs (1.82-1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
ubuntu@ip-10-0-2-86:~$ echo AKIARKDIT5BH65IYQWXV:MrrcshGLH6BqA7TgM1iUcCQYCZ5ZmpY+XhvyvFo0 > ~/.passwd-s3fs
ubuntu@ip-10-0-2-86:~$ chmod 600 .passwd-s3fs
ubuntu@ip-10-0-2-86:~$ sudo mkdir ~/buckets3
ubuntu@ip-10-0-2-86:~$ sudo s3fs s2bucket ~/buckets3/
```



# Database RDS

The screenshot displays the AWS Management Console for Amazon RDS. The browser window shows the URL `https://ap-southeast-2.console.aws.amazon.com/rds/home?region=ap-southeast-2#databases:`. The left sidebar contains the 'Amazon RDS' menu with various options. The main content area shows the 'Databases' page with a table of existing databases.

**Amazon RDS**

- Dashboard
- Databases**
- Query Editor
- Performance Insights
- Snapshots
- Automated backups
- Reserved instances
- Proxies
- Subnet groups
- Parameter groups
- Option groups
- Events
- Event subscriptions
- Recommendations
- Certificate update

**Creating database databasefb.**  
Your database might take a few minutes to launch. [View credential details](#)

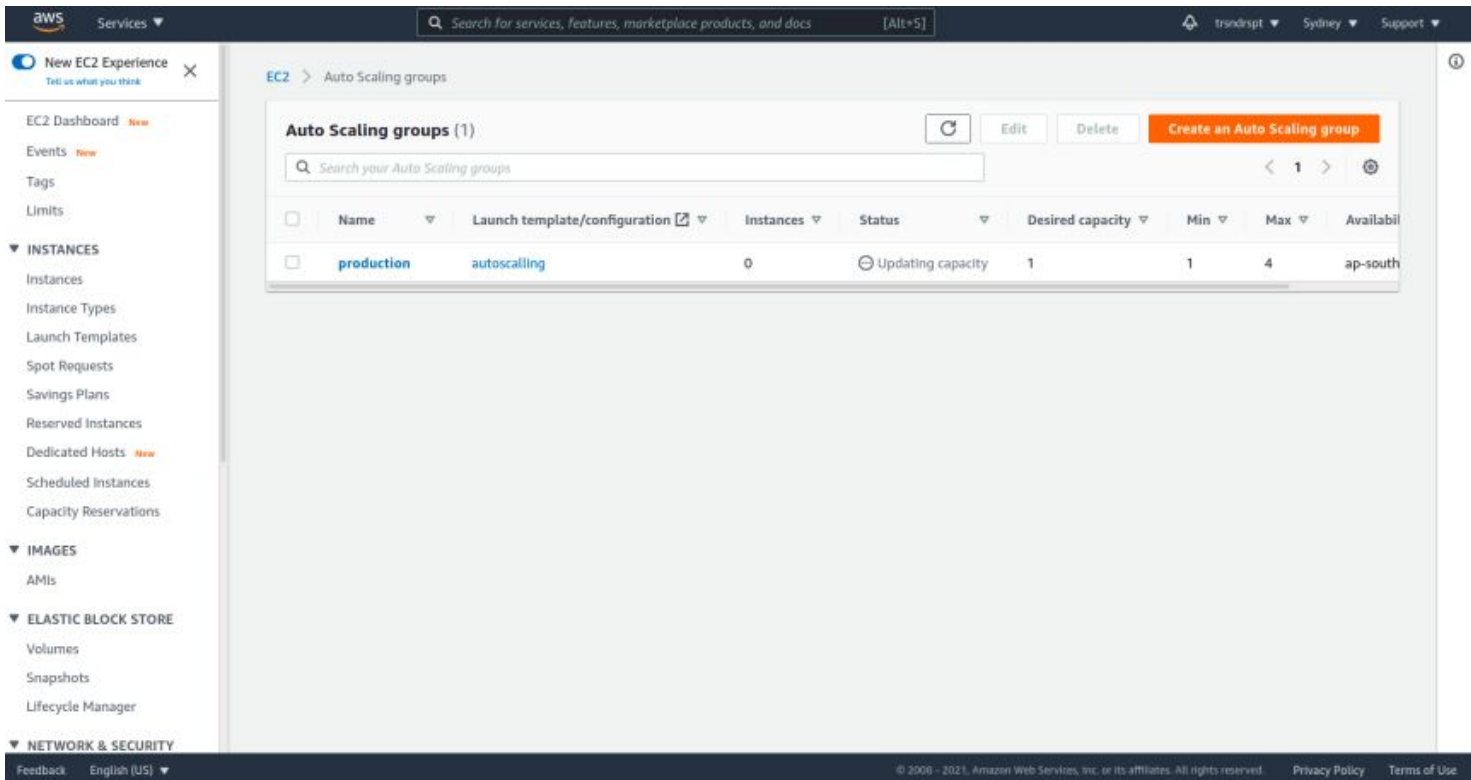
RDS > Databases

**Databases** ☒ Group resources [Refresh](#) [Modify](#) [Actions](#) [Restore from S3](#) [Create database](#)

<input type="checkbox"/>	DB identifier	Role	Engine	Region & AZ	Size	Status	CPU	Cu
<input type="radio"/>	databasefb	Instance	MySQL Community	-	db.t2.micro	Creating	-	

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# Auto Scaling



The screenshot shows the AWS Management Console interface for Auto Scaling groups. The top navigation bar includes the AWS logo, a search bar, and user information. The left sidebar contains a navigation menu with categories like EC2 Dashboard, INSTANCES, IMAGES, ELASTIC BLOCK STORE, and NETWORK & SECURITY. The main content area is titled 'Auto Scaling groups (1)' and features a table listing the groups.

**Auto Scaling groups (1)**

Search your Auto Scaling groups

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
<input type="checkbox"/>	production	autoscalling	0	Updating capacity	1	1	4	ap-south

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# ELB Elastic Load Balancing

The screenshot displays the AWS Management Console interface for the Elastic Load Balancing (ELB) service. The left sidebar shows the navigation menu with categories like EC2 Experience, Instances, Images, Elastic Block Store, and Network & Security. The main content area shows the 'fesbuklb' load balancer details.

**Load balancer: fesbuklb**

**Basic Configuration**

Property	Value
Name	fesbuklb
* DNS name	fesbuklb-1621893040.ap-southeast-2.elb.amazonaws.com (A Record)
Type	Classic ( <a href="#">Migrate Now</a> )
Scheme	internet-facing
Availability Zones	subnet-041f0dc3e37030f4 - ap-southeast-2c, subnet-049e79c73dcd3ab11 - ap-southeast-2a, subnet-0ef2ddddd958bcb77 - ap-southeast-2b
Creation time	January 21, 2021 at 7:01:19 PM UTC+7
Hosted zone	Z1GM3OXH4ZPM65
Status	3 of 3 instances in service
VPC	vpc-060359218ddde4441

**Port Configuration**

Port Configuration	Details
80 (HTTP) forwarding to 80 (HTTP)	Stickiness: Disabled

[Edit stickiness](#)

# Route 53

The screenshot displays the AWS Route 53 console interface. A green notification banner at the top states: "Record for aiueocaciceco.site was successfully created." The left sidebar contains navigation links for Route 53, including Dashboard, Hosted zones, Health checks, Traffic flow, Domains, and Resolver. The main content area shows the configuration for the hosted zone "aiueocaciceco.site".

**Hosted zone details**

Records (4) | DNSSEC signing | Hosted zone tags (0)

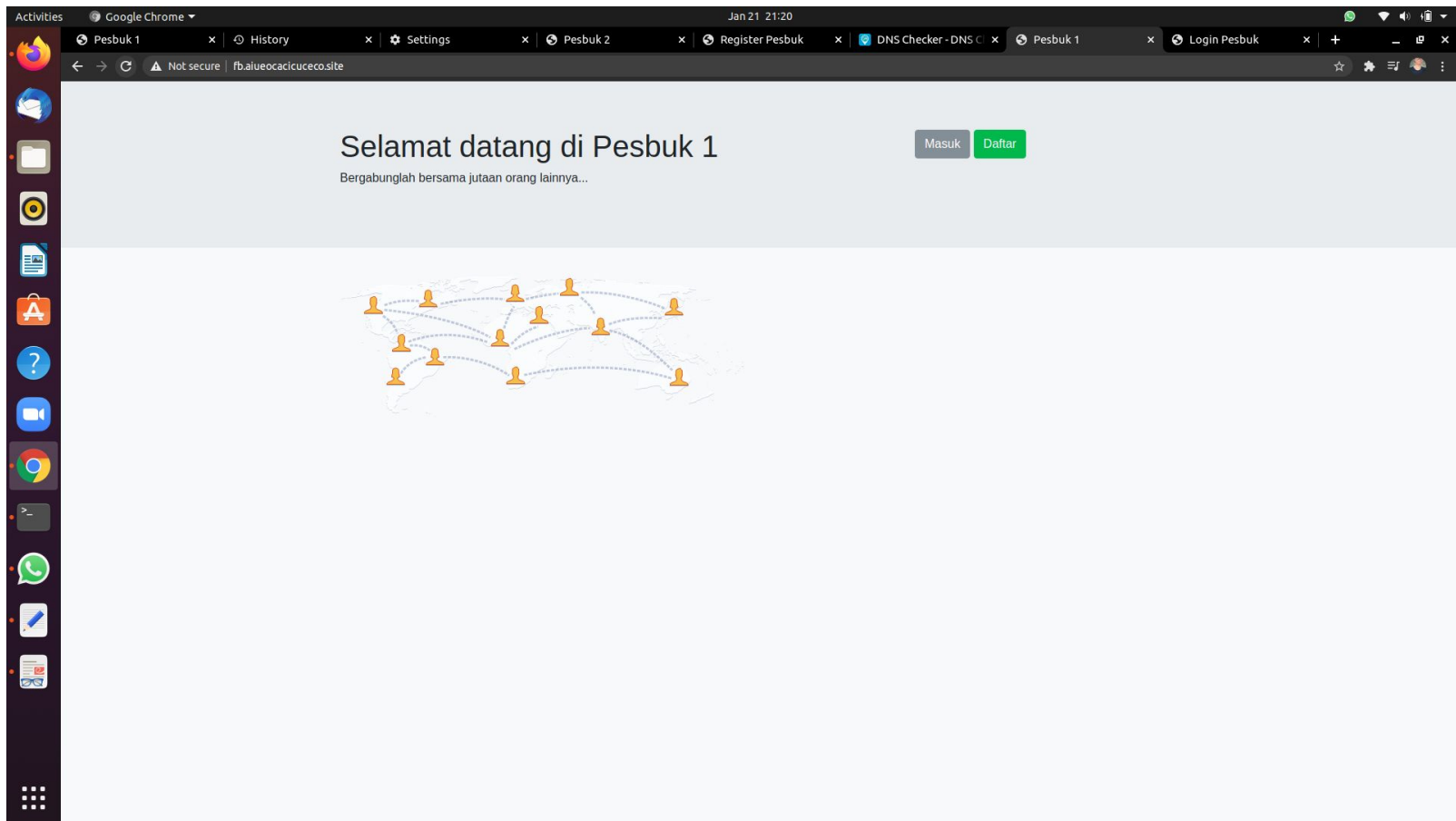
**Records (4)**

Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

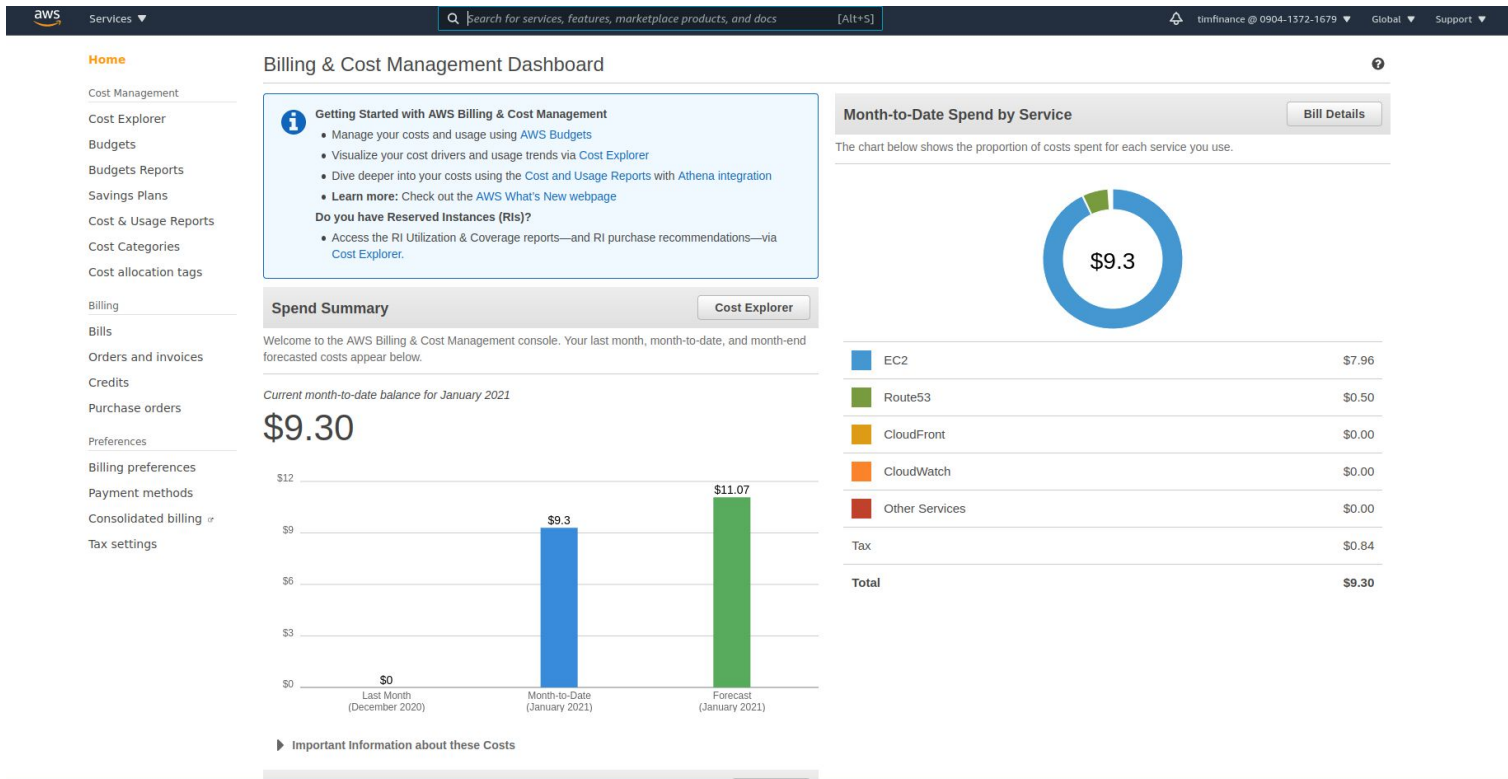
Filter records by property or value

<input type="checkbox"/>	Record name	Type	Routing policy	Differentiator	Value/Route traffic to
<input type="checkbox"/>	ip.aiueocaciceco.site	A	Simple	-	3.25.206.172
<input type="checkbox"/>	fb.aiueocaciceco.site	CNAME	Simple	-	fesbuklb-1621893040.ap-southeast-2.elb.amazonaws.com
<input type="checkbox"/>	aiueocaciceco.site	NS	Simple	-	ns-389.awsdns-48.com. ns-681.awsdns-21.net. ns-1311.awsdns-35.org. ns-1828.awsdns-36.co.uk.
<input type="checkbox"/>	aiueocaciceco.site	SOA	Simple	-	ns-389.awsdns-48.com. awsdns-hostmaster.amazon.com. 1 7200 900 1209600 86400

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