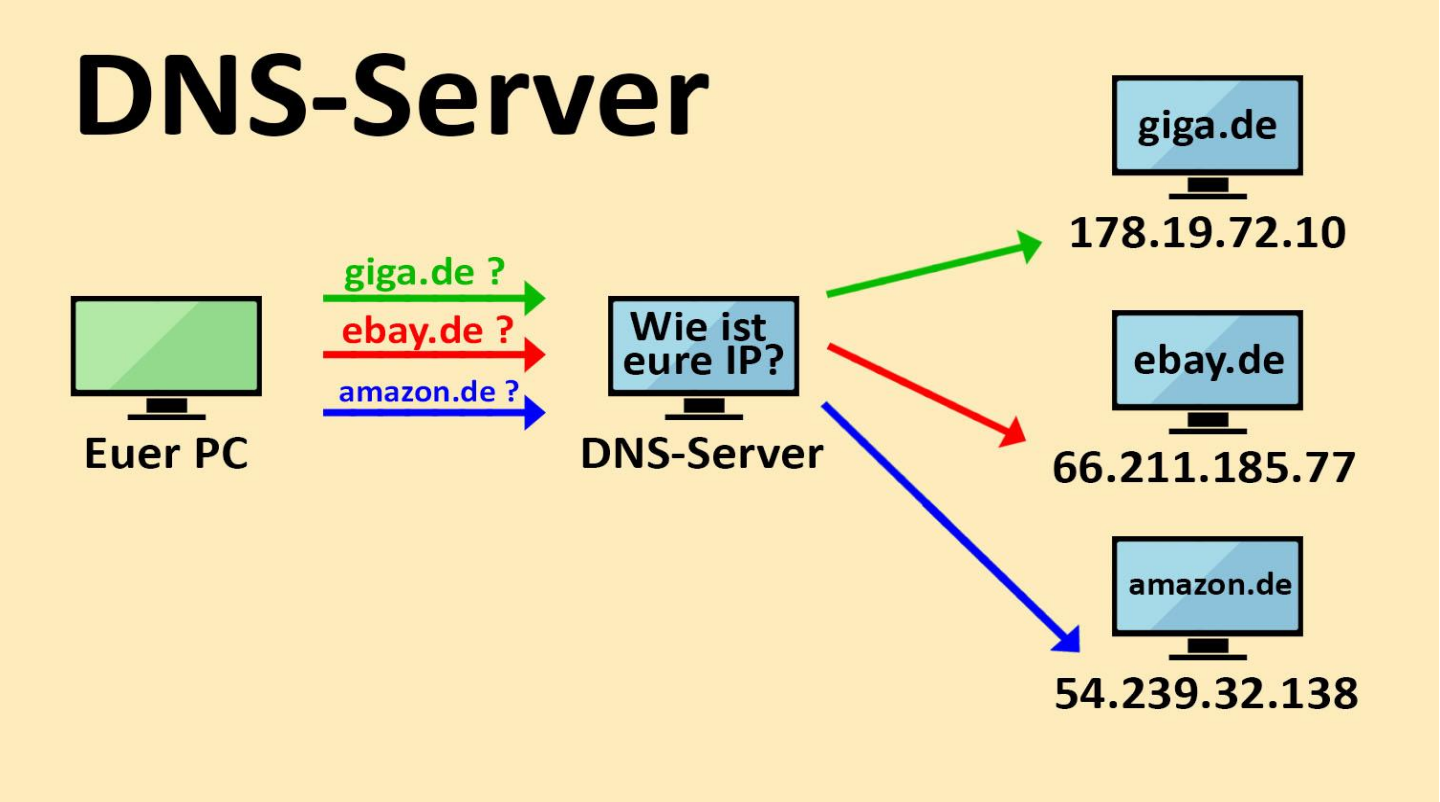

amazon
web services
Route 53

DNS



DNS is used to resolve host name to IP address and IP address to host name.

Topics to be covered—Route53

1) DNS Introduction
2) Registering new domain in freenom.com
3) Host Domain name in AWS Route53
4) Map domain name with Instance IP
5) Map domain name with load balancer link
6) Map domain name with S3 bucket link
7) Routing Introduction
8) Configure Routing Policies- Latency and failover
9) Configure failover with common storage EFS

DNS Records

DNS records *are basically mapping files that tell the* ***DNS*** *server which IP address each domain is associated with, and how to handle requests sent to each domain.*

Common DNS Record Types	
Record	**Description**
A	Address record (IPv4)
AAAA	Address record (IPv6)
CNAME	Canonical Name record
MX	Mail Exchanger record
NS	Nameserver record
PTR	Pointer record
SOA	Start of Authority record
SRV	Service Location record
TXT	Text record

DNS Records Summary

1) Host or A -- Resolve Name to IP
2) Pointer or PTR – Resolve IP to Name
3) CNAME – Canonical name or Alias
4) Name Server or NS
5) Start of Authority or SOA

The DNS 'start of authority' (SOA) record stores important information about a domain or zone such as the email address of the administrator, when the domain was last updated, and how long the server should wait between refreshes.

Amazon Route 53 automatically creates a name server (NS) record that has the same name as your hosted zone. It lists the four name servers that are the authoritative name servers for your hosted zone.

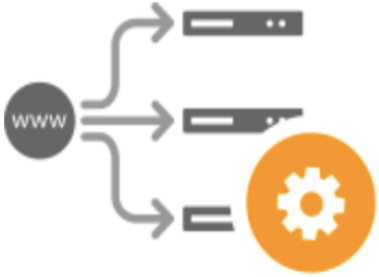
Domain Host Sites

1. GoDaddy
2. Bluehost
3. Freenom
4. HostGator
5. InMotion Hosting
6. Hostinger
7. Tsohost
8. Wix
9. SiteGround
10. Hostwinds
11. Weebly

DNS management

If you already have a domain name, such as example.com, Route 53 can tell the Domain Name System (DNS) where on the Internet to find web servers, mail servers, and other resources for your domain.
Learn More

Get started now



Traffic management

Route 53 traffic flow provides a visual tool that you can use to create and update sophisticated routing policies to route end users to multiple endpoints for your application.
Learn More

Get started now

Lab

1) Registering new domain in freenom.com

2) Host Domain name in AWS Route53

3) Map domain name with Instance IP

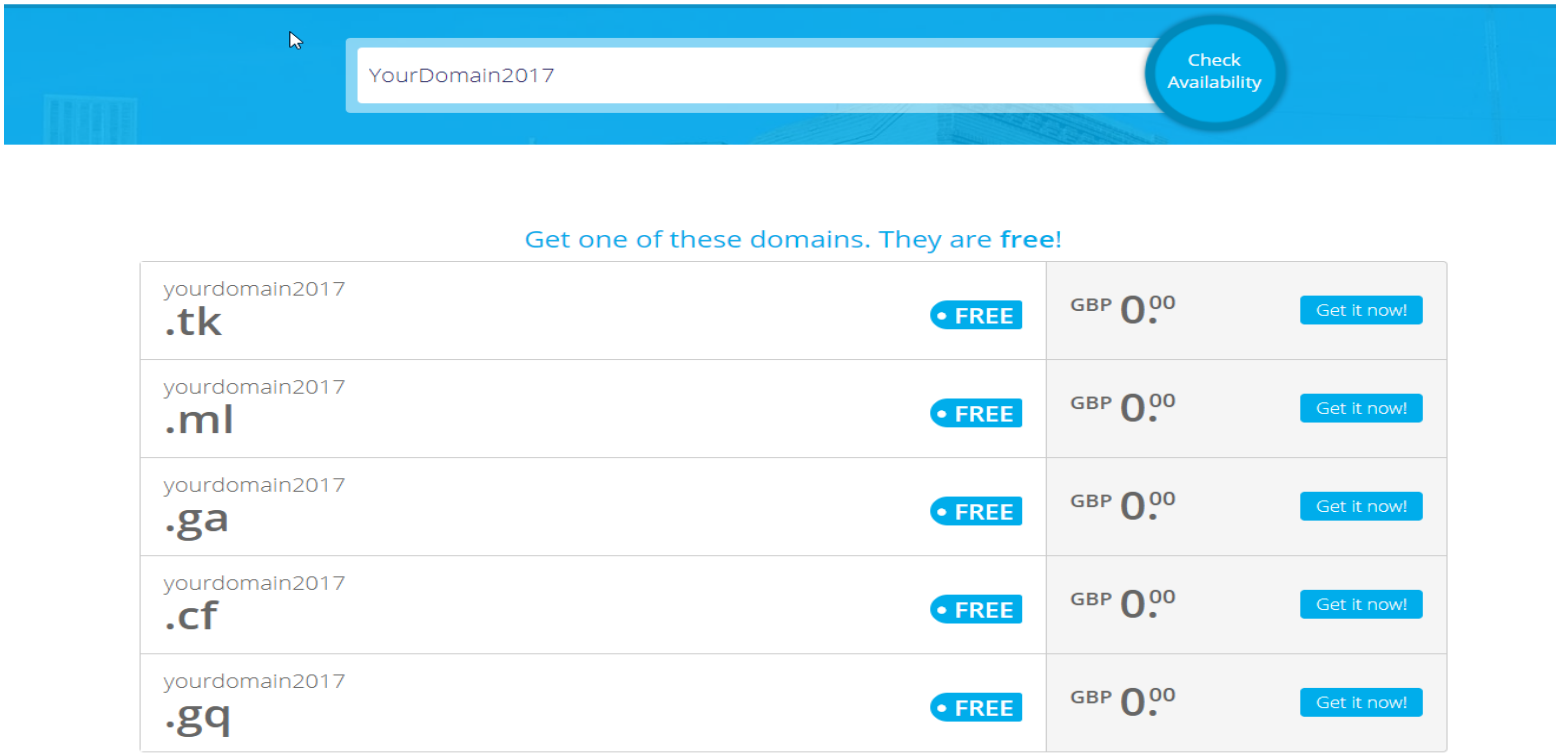
4) Map domain name with load balancer link

5) Map domain name with S3 bucket link

6) Configure Routing Policies- Latency and failover

Route53 Lab –1 Register domain name

1) Register your domain name(deepak.tk) in freenom.com



Map Freenom domain name with AWS

2) AWS console-services-Route53-DNS management-Hosted zone-create hosted zone-

Give domain name – deepak.tk ------ create

4) Now select NS value -- copy all NS value one by one and paste into – freenom.com –services—my domain– manage domain—management tool – name servers – use custom nameserver –paste here one by one ---change name servers

My Domains

View & manage all the domains you have registered with us from here...

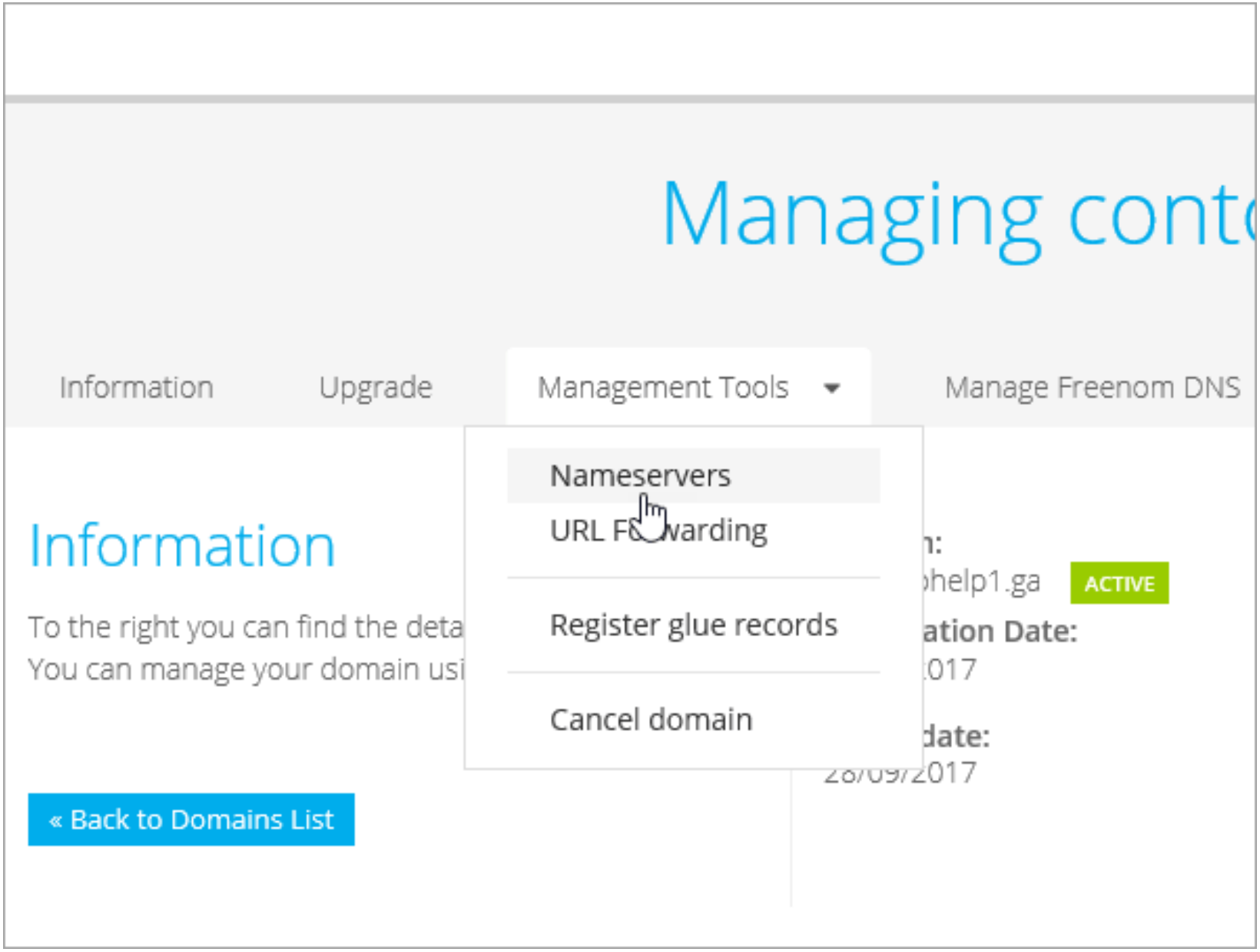
Enter Domain to Find

Filter

1 Records Found, Page 1 of 1

Domain	Registration Date	Expiry date	Status	Type		
contosohelp1.ga	28/06/2017	28/09/2017	ACTIVE	Free	Manage Domain	Get GoSite

Results Per Page: 10


Managing conte
Information
Upgrade
Management Tools
Manage Freenom DNS
Nameservers
URL Forwarding
Register glue records
Cancel domain
Information
To the right you can find the deta
You can manage your domain usi
« Back to Domains List
ACTIVE

Nameservers

You can change where your domain points to here. Please be aware changes can take up to 24 hours to propogate.

- (●) **Use default nameservers**
- ( ) **Use custom nameservers (enter below)**

Nameserver 1

NS01.FREENOM.COM

Nameserver 2

NS02.FREENOM.COM

Nameserver 3

NS03.FREENOM.COM

Nameserver 4

NS04.FREENOM.COM

Nameserver 5

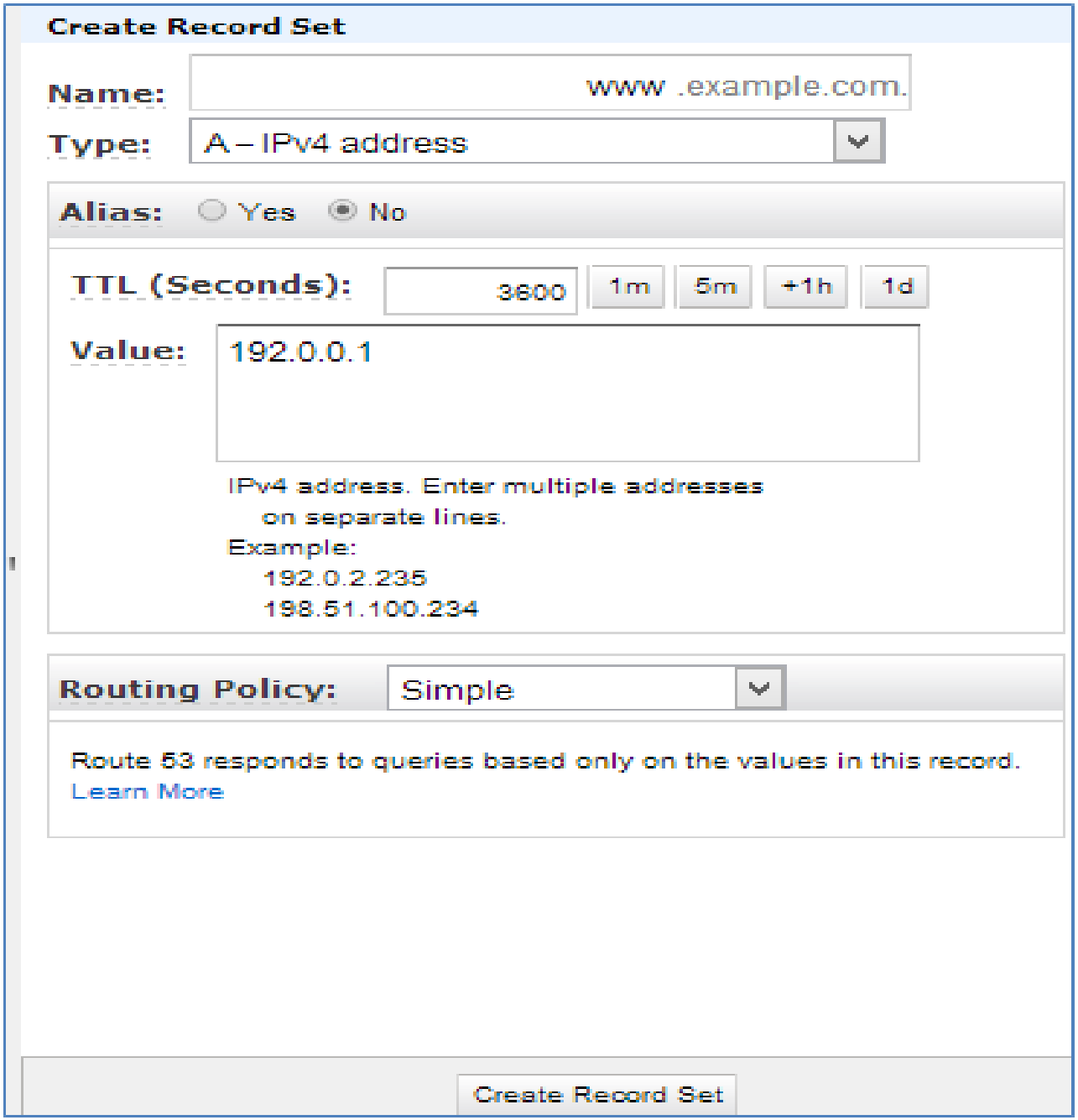
Change Nameservers

Route53 Lab –2 Map IP with Domain name

1) Launch one Instance and configure web service there

2) Route53– Hosted Zone – open registered domain name – Create Record set – fill the detail – type – A – In IP address : Instance public IP –ok

3) Now copy domain name and paste in Browser

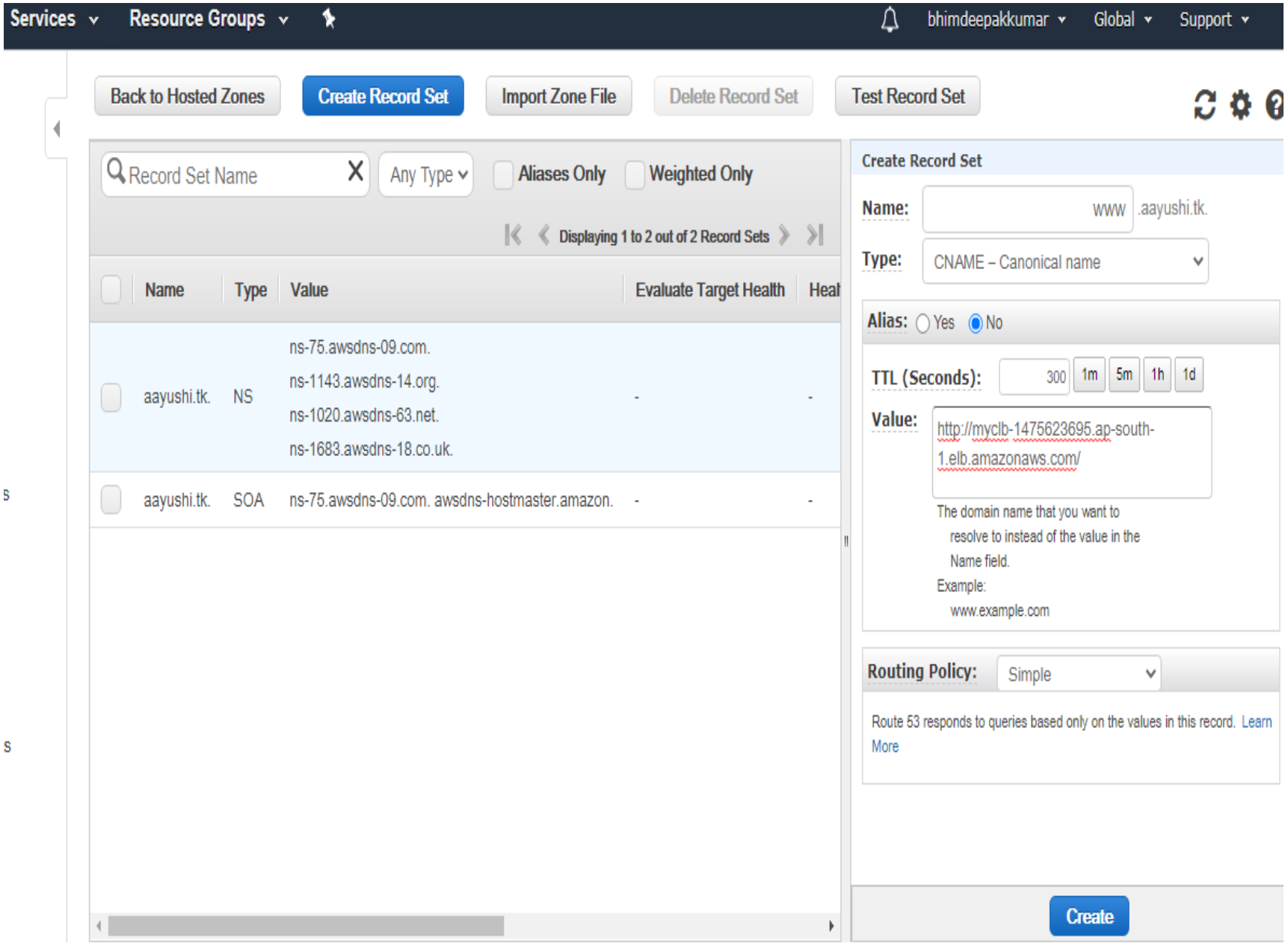

Create Record Set
Name:
www .example.com.
Type:
A – IPv4 address
Alias:
Yes
No
TTL (Seconds):
3600
1m
5m
+1h
1d
Value:
192.0.0.1
IPv4 address. Enter multiple addresses on separate lines.
Example:
192.0.2.235
198.51.100.234
Routing Policy:
Simple
Route 53 responds to queries based only on the values in this record.
Learn More
Create Record Set

Route53 Lab –3 Map Load balancer with Domain name

1) Launch two Instance and configure web service there having different web content

2) Route53– Hosted Zone – open registered domain name – Create Record set name: www–----Type – CNAME --. And paste load balancer link in value box ---create

3) Now copy domain name and paste in Browser


Services
Resource Groups
bhimdeepakkumar
Global
Support
Back to Hosted Zones
Create Record Set
Import Zone File
Delete Record Set
Test Record Set
Record Set Name
Any Type
Aliases Only
Weighted Only
Displaying 1 to 2 out of 2 Record Sets
Name
Type
Value
Evaluate Target Health
Heal
aayushi.tk.
NS
ns-75.awsdns-09.com.
ns-1143.awsdns-14.org.
ns-1020.awsdns-63.net.
ns-1683.awsdns-18.co.uk.
aayushi.tk.
SOA
ns-75.awsdns-09.com. awsdns-hostmaster.amazon.
Create Record Set
Name:
www
.aayushi.tk.
Type:
CNAME – Canonical name
Alias:
Yes
No
TTL (Seconds):
300
1m
5m
1h
1d
Value:
http://myclb-1475623695.ap-south-1.elb.amazonaws.com/
The domain name that you want to resolve to instead of the value in the Name field.
Example:
www.example.com
Routing Policy:
Simple
Route 53 responds to queries based only on the values in this record. Learn More
Create

Route53 Lab –4 Map S3 bucket link with Domain name

1) Create a bucket in S3 named : www.aayushi.tk

2) Upload index.html file here-make public

3) Open bucket –properties-static website hosting-

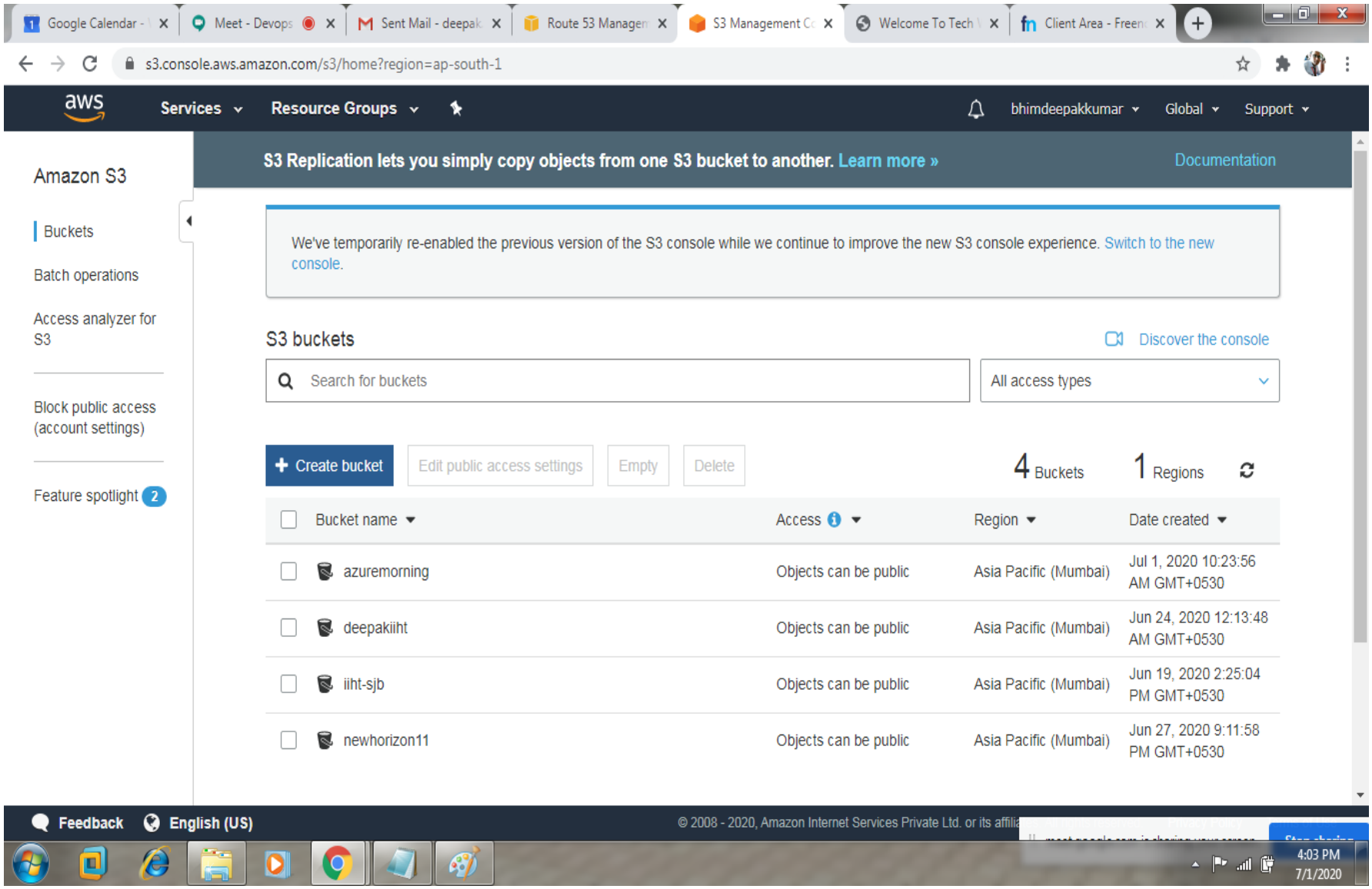
--Enable –type index.html –save

4)Open google and find s3 bucket policy code

5) Paste the code in S3 bucket-policy

6) Open Route 53 –

Open hosted zone –create record set –select alias—select target s3 : aayushi.tk --create


Google Calendar -
Meet - Devops
Sent Mail - deepak
Route 53 Manager
S3 Management C
Welcome To Tech
Client Area - Freen
s3.console.aws.amazon.com/s3/home?region=ap-south-1
aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
Amazon S3
Buckets
Batch operations
Access analyzer for S3
Block public access (account settings)
Feature spotlight 2
S3 Replication lets you simply copy objects from one S3 bucket to another. Learn more »
Documentation
We've temporarily re-enabled the previous version of the S3 console while we continue to improve the new S3 console experience. Switch to the new console.
S3 buckets
Discover the console
Search for buckets
All access types
+ Create bucket
Edit public access settings
Empty
Delete
4 Buckets
1 Regions
Bucket name
Access
Region
Date created
azuremorning
Objects can be public
Asia Pacific (Mumbai)
Jul 1, 2020 10:23:56 AM GMT+0530
deepakiiht
Objects can be public
Asia Pacific (Mumbai)
Jun 24, 2020 12:13:48 AM GMT+0530
iiht-sjb
Objects can be public
Asia Pacific (Mumbai)
Jun 19, 2020 2:25:04 PM GMT+0530
newhorizon11
Objects can be public
Asia Pacific (Mumbai)
Jun 27, 2020 9:11:58 PM GMT+0530
Feedback
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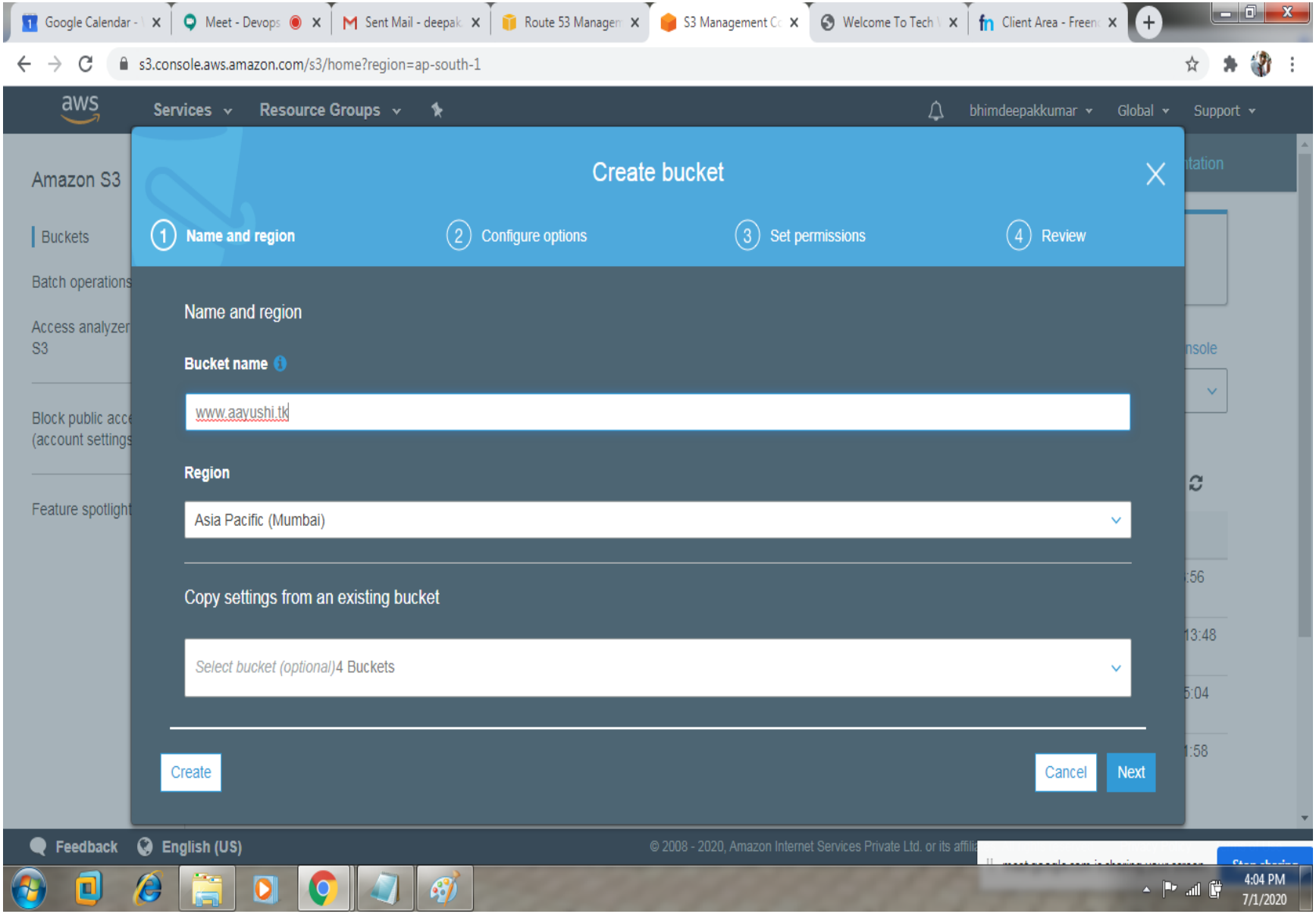
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Amazon S3
Buckets
Batch operations
Access analyzer for S3
Block public acce (account settings
Feature spotlight
Create bucket
1 Name and region
2 Configure options
3 Set permissions
4 Review
Name and region
Bucket name
www.aayushi.tk
Region
Asia Pacific (Mumbai)
Copy settings from an existing bucket
Select bucket (optional) 4 Buckets
Create
Cancel
Next
Feedback
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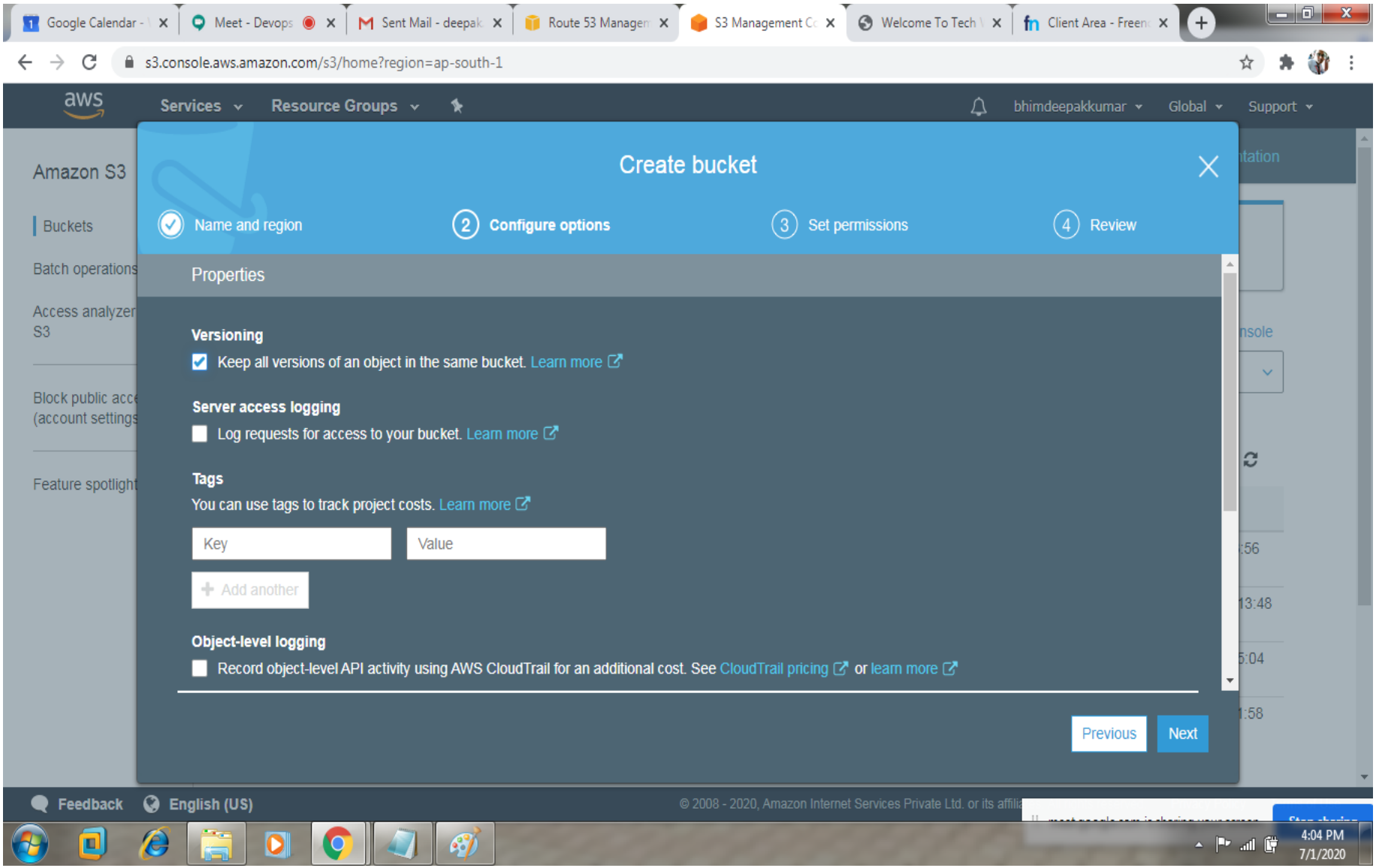
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Resource Groups
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Support
Amazon S3
Buckets
Batch operations
Access analyzer for S3
Block public acce (account settings
Feature spotlight
Create bucket
1 Name and region
2 Configure options
3 Set permissions
4 Review
Properties
Versioning
Keep all versions of an object in the same bucket. Learn more
Server access logging
Log requests for access to your bucket. Learn more
Tags
You can use tags to track project costs. Learn more
Key
Value
Add another
Object-level logging
Record object-level API activity using AWS CloudTrail for an additional cost. See CloudTrail pricing or learn more
Previous
Next
Feedback
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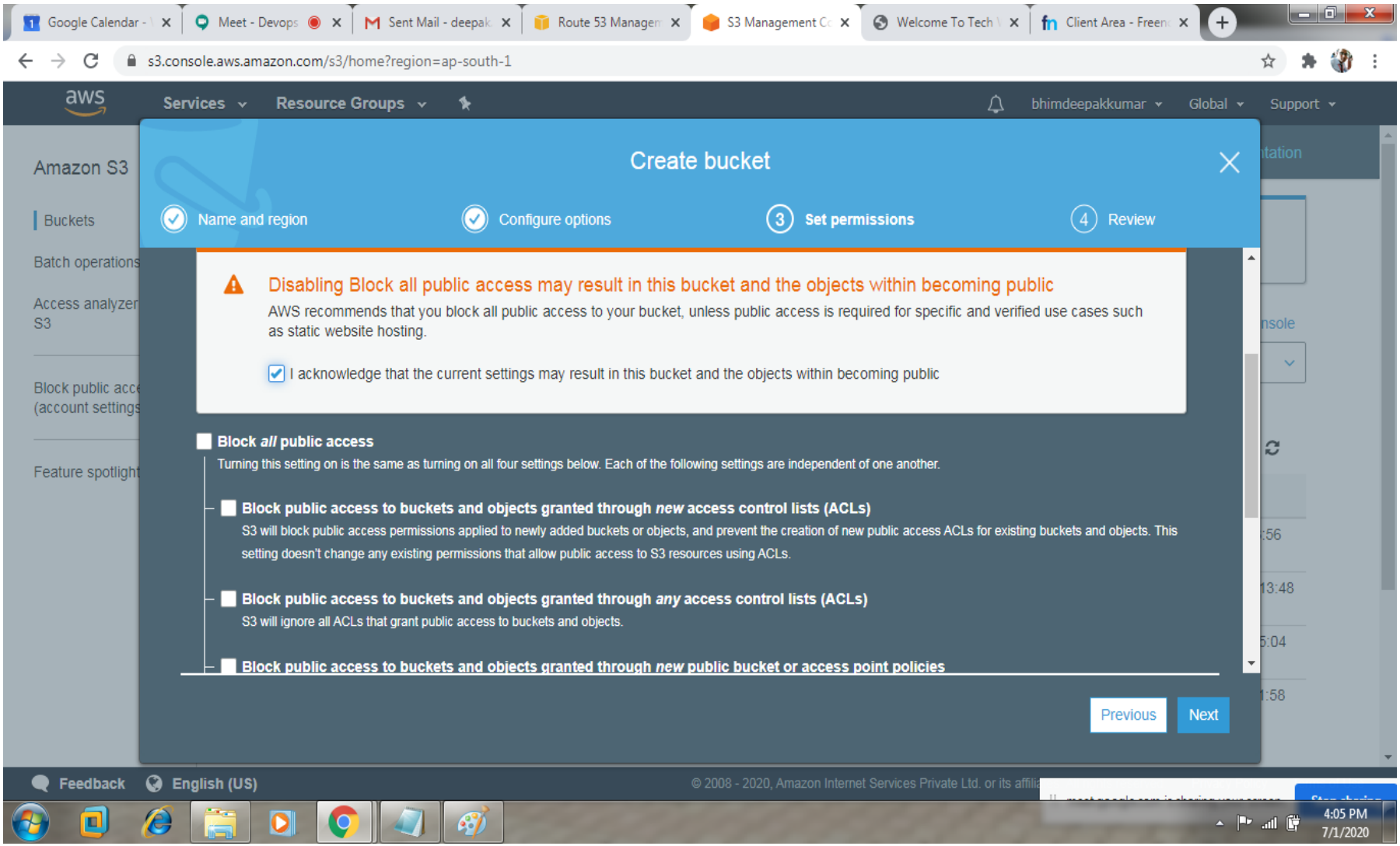
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aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
Amazon S3
Buckets
Batch operations
Access analyzer for S3
Block public access (account settings)
Feature spotlight
Create bucket
Name and region
Configure options
3 Set permissions
4 Review
Disabling Block all public access may result in this bucket and the objects within becoming public
AWS recommends that you block all public access to your bucket, unless public access is required for specific and verified use cases such as static website hosting.
I acknowledge that the current settings may result in this bucket and the objects within becoming public
Block all public access
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.
Block public access to buckets and objects granted through new access control lists (ACLs)
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
Block public access to buckets and objects granted through any access control lists (ACLs)
S3 will ignore all ACLs that grant public access to buckets and objects.
Block public access to buckets and objects granted through new public bucket or access point policies
Previous
Next
Feedback
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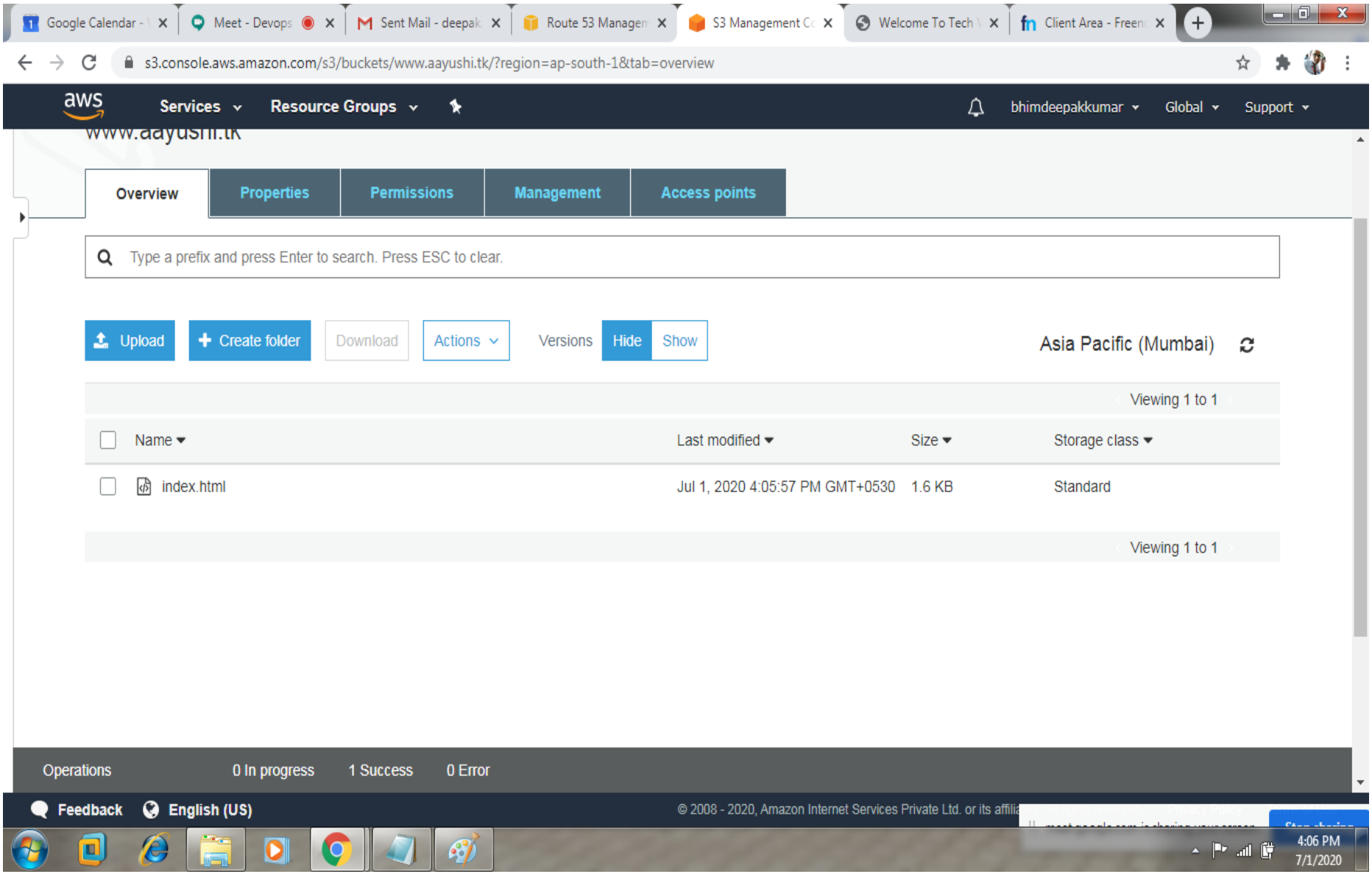
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Sent Mail - deepak
Route 53 Manager
S3 Management C
Welcome To Tech
Client Area - Freen
s3.console.aws.amazon.com/s3/buckets/www.aayushi.tk/?region=ap-south-1&tab=overview
aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
www.aayushi.tk
Overview
Properties
Permissions
Management
Access points
Type a prefix and press Enter to search. Press ESC to clear.
Upload
Create folder
Download
Actions
Versions
Hide
Show
Asia Pacific (Mumbai)
Viewing 1 to 1
Name
Last modified
Size
Storage class
index.html
Jul 1, 2020 4:05:57 PM GMT+0530
1.6 KB
Standard
Viewing 1 to 1
Operations
0 In progress
1 Success
0 Error
Feedback
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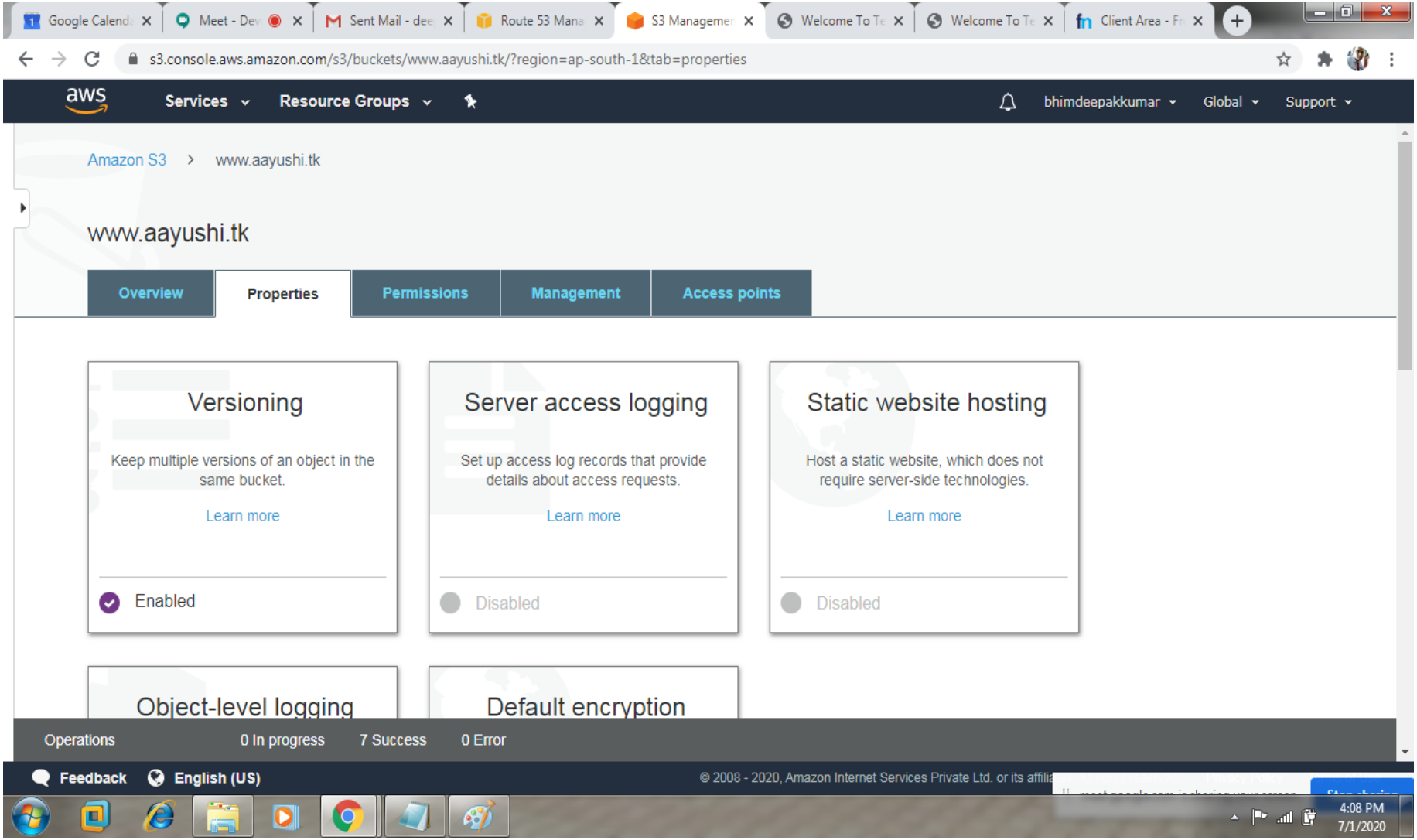
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www.aayushi.tk
Overview
Properties
Permissions
Management
Access points
Versioning
Keep multiple versions of an object in the same bucket.
Learn more
Enabled
Server access logging
Set up access log records that provide details about access requests.
Learn more
Disabled
Static website hosting
Host a static website, which does not require server-side technologies.
Learn more
Disabled
Object-level logging
Default encryption
Operations
0 In progress
7 Success
0 Error
Feedback
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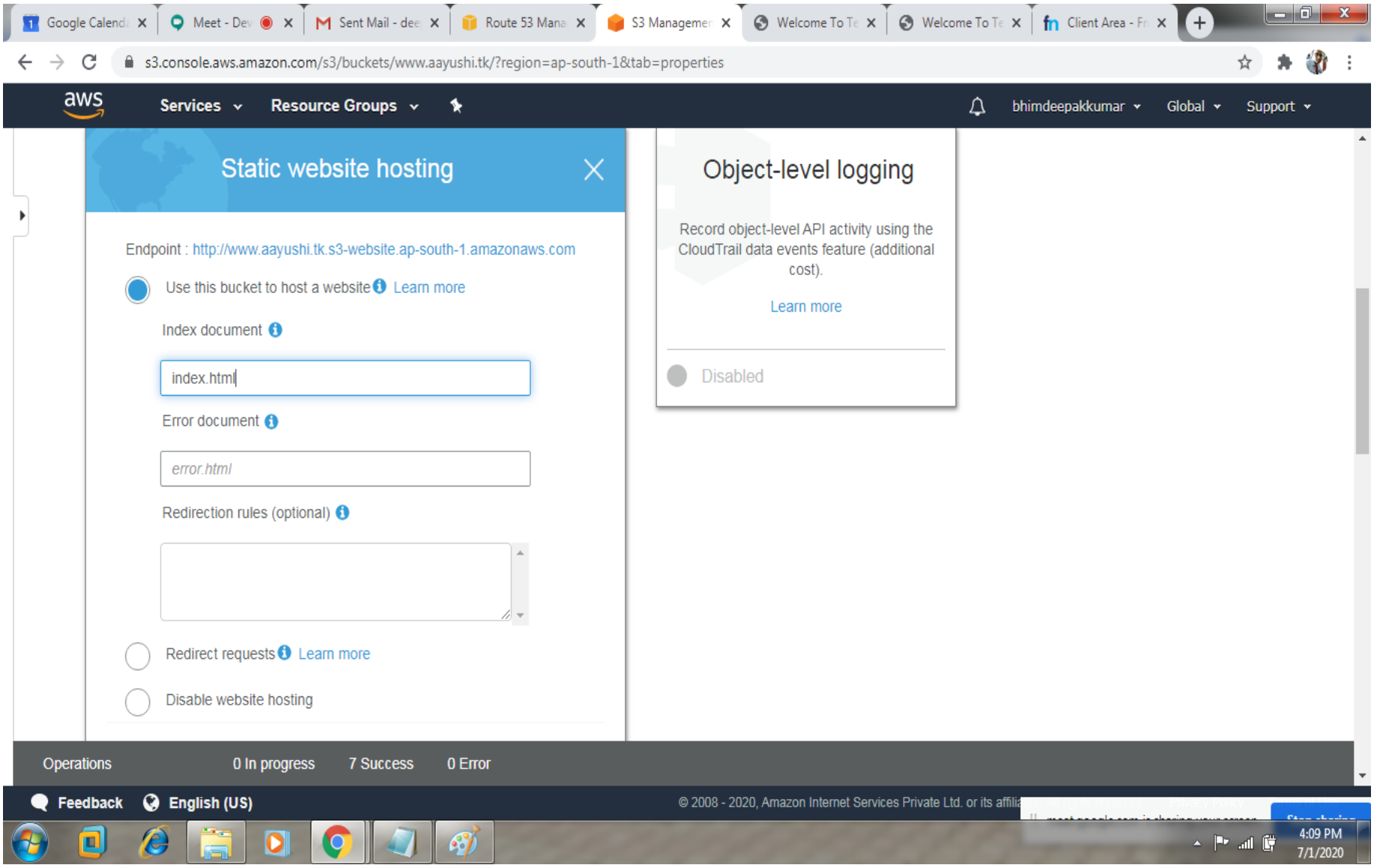
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Services
Resource Groups
bhimdeepakkumar
Global
Support
Static website hosting
Endpoint : http://www.aayushi.tk.s3-website.ap-south-1.amazonaws.com
Use this bucket to host a website
Learn more
Index document
index.html
Error document
error.html
Redirection rules (optional)
Redirect requests
Learn more
Disable website hosting
Object-level logging
Record object-level API activity using the CloudTrail data events feature (additional cost).
Learn more
Disabled
Operations
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0 Error
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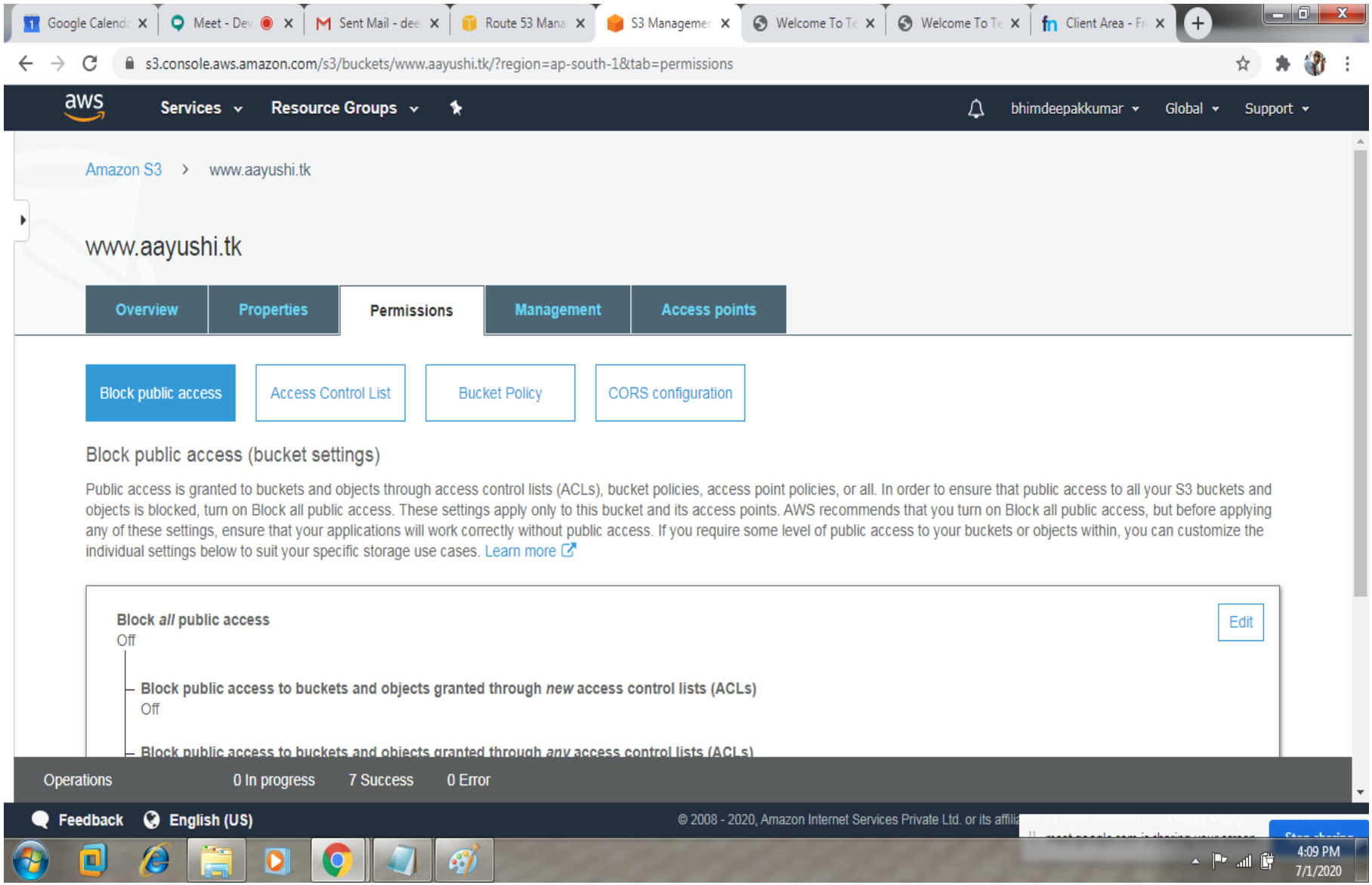
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Global
Support
Amazon S3 > www.aayushi.tk
www.aayushi.tk
Overview
Properties
Permissions
Management
Access points
Block public access
Access Control List
Bucket Policy
CORS configuration
Block public access (bucket settings)
Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. Learn more
Edit
Block all public access
Off
Block public access to buckets and objects granted through new access control lists (ACLs)
Off
Block public access to buckets and objects granted through any access control lists (ACLs)
Operations
0 In progress
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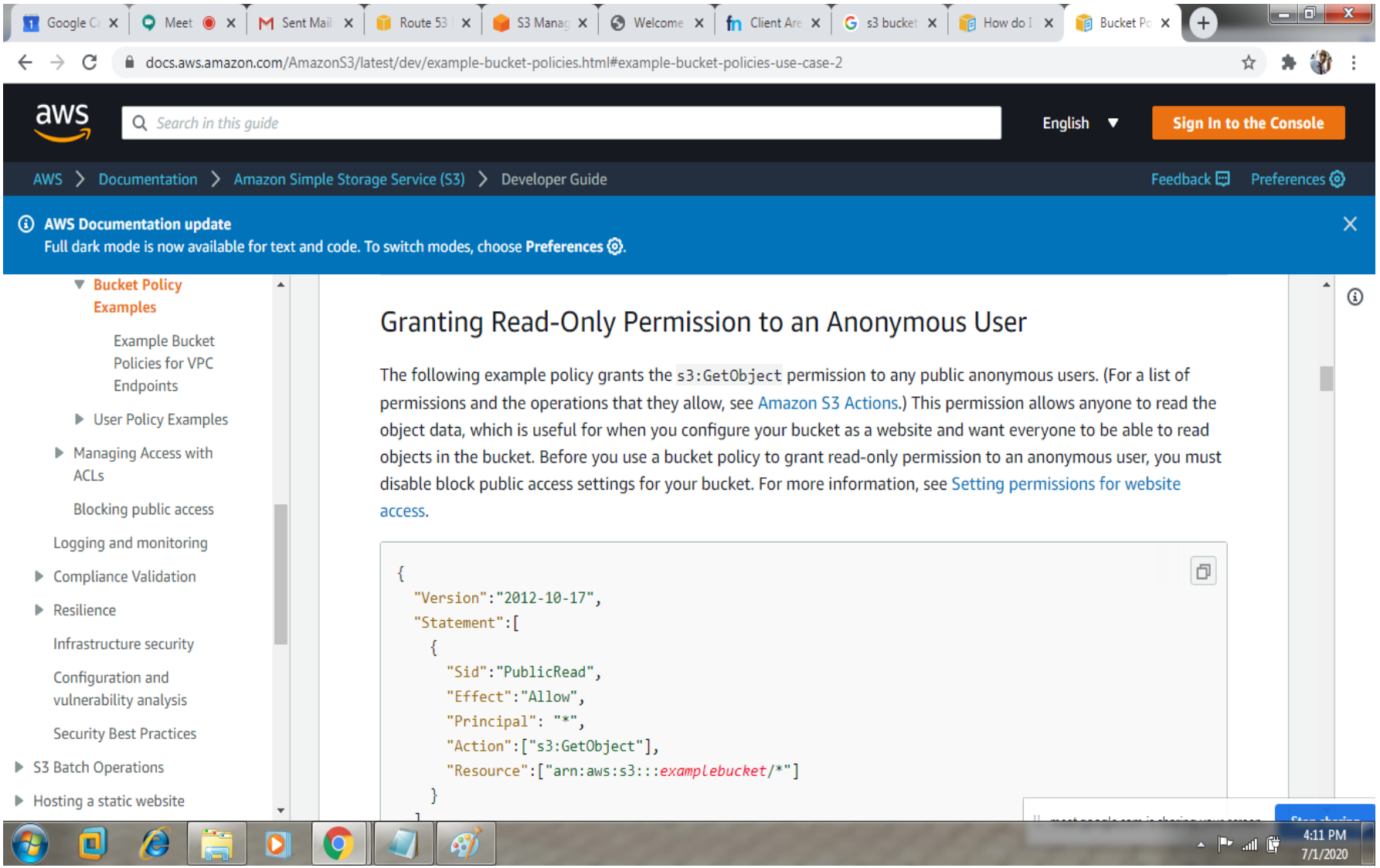
Google C
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s3 bucket
How do I
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docs.aws.amazon.com/AmazonS3/latest/dev/example-bucket-policies.html#example-bucket-policies-use-case-2
aws
Search in this guide
English
Sign In to the Console
AWS > Documentation > Amazon Simple Storage Service (S3) > Developer Guide
Feedback
Preferences
AWS Documentation update
Full dark mode is now available for text and code. To switch modes, choose Preferences.
Bucket Policy Examples
Example Bucket Policies for VPC Endpoints
User Policy Examples
Managing Access with ACLs
Blocking public access
Logging and monitoring
Compliance Validation
Resilience
Infrastructure security
Configuration and vulnerability analysis
Security Best Practices
S3 Batch Operations
Hosting a static website
Granting Read-Only Permission to an Anonymous User
The following example policy grants the s3:GetObject permission to any public anonymous users. (For a list of permissions and the operations that they allow, see Amazon S3 Actions.) This permission allows anyone to read the object data, which is useful for when you configure your bucket as a website and want everyone to be able to read objects in the bucket. Before you use a bucket policy to grant read-only permission to an anonymous user, you must disable block public access settings for your bucket. For more information, see Setting permissions for website access.
{
"Version":"2012-10-17",
"Statement":[
{
"Sid":"PublicRead",
"Effect":"Allow",
"Principal": "*",
"Action":["s3:GetObject"],
"Resource":["arn:aws:s3:::examplebucket/*"]
}
]
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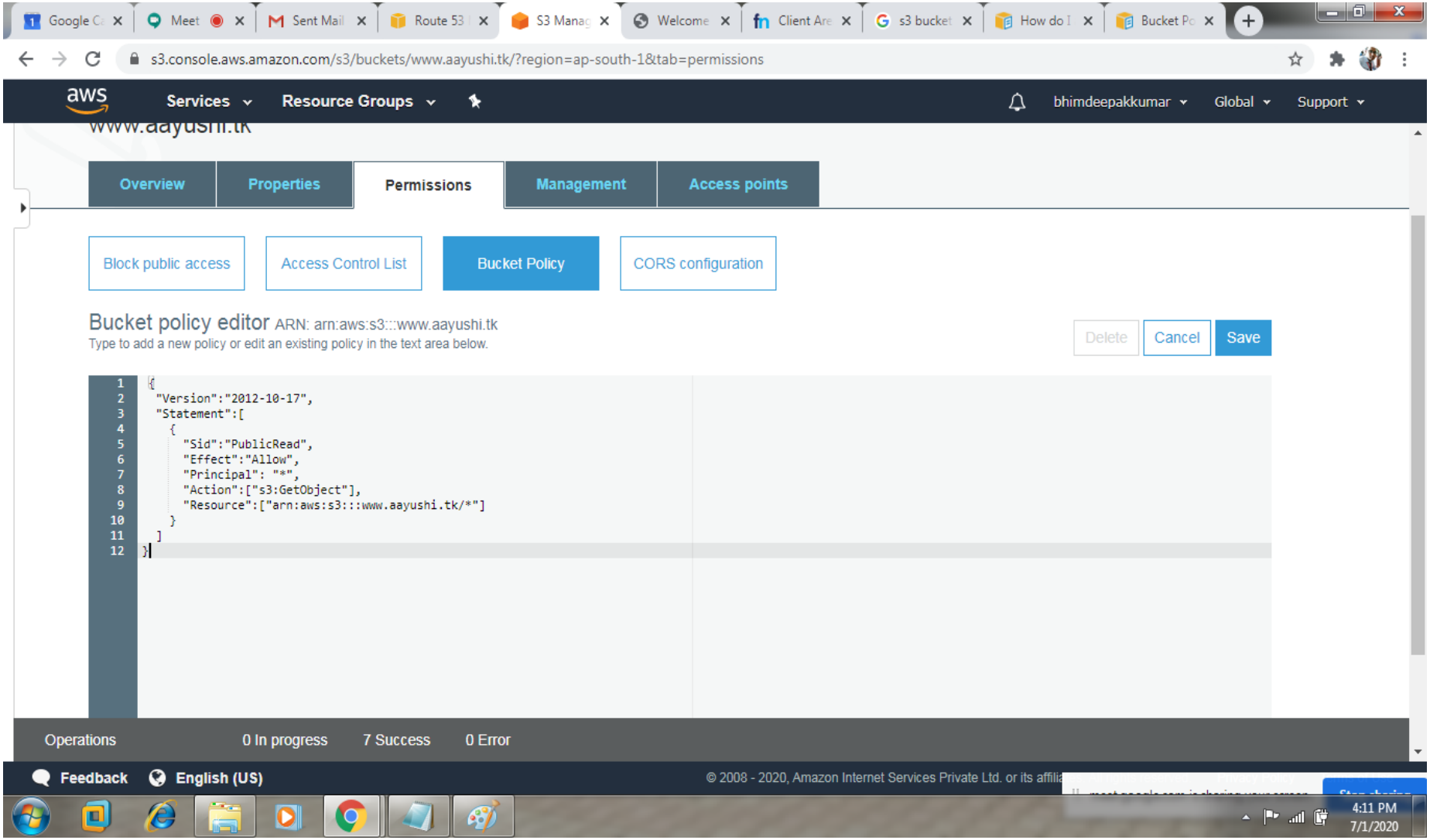
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S3 Manag
Welcome
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s3 bucket
How do I
Bucket Po
s3.console.aws.amazon.com/s3/buckets/www.aayushi.tk/?region=ap-south-1&tab=permissions
aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
www.aayushi.tk
Overview
Properties
Permissions
Management
Access points
Block public access
Access Control List
Bucket Policy
CORS configuration
Bucket policy editor ARN: arn:aws:s3:::www.aayushi.tk
Type to add a new policy or edit an existing policy in the text area below.
Delete
Cancel
Save
{
"Version":"2012-10-17",
"Statement":[
{
"Sid":"PublicRead",
"Effect":"Allow",
"Principal": "*",
"Action":["s3:GetObject"],
"Resource":["arn:aws:s3:::www.aayushi.tk/*"]
}
]
}
Operations
0 In progress
7 Success
0 Error
Feedback
English (US)
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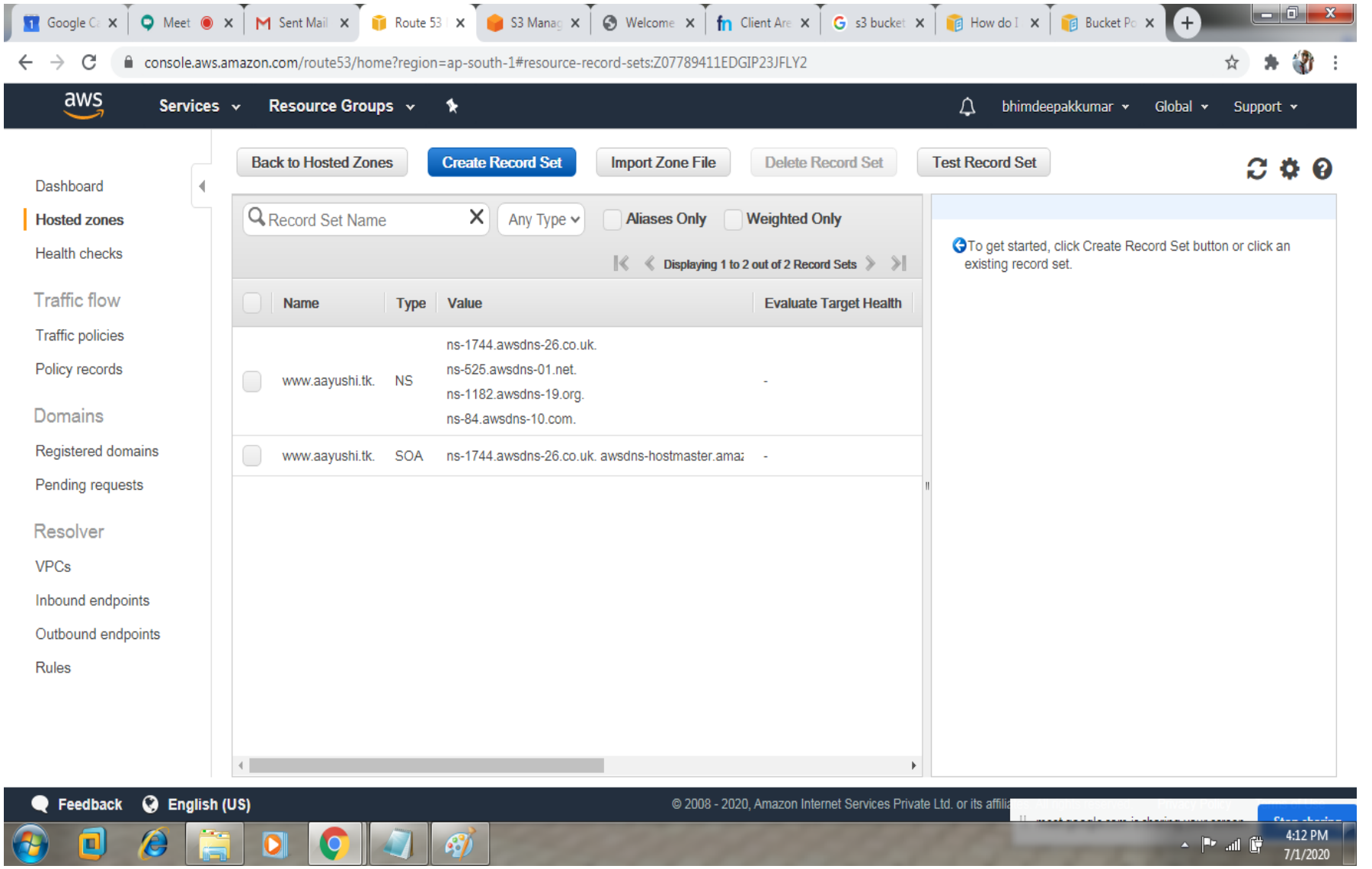
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console.aws.amazon.com/route53/home?region=ap-south-1#resource-record-sets:Z07789411EDGIP23JFLY2
aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
Dashboard
Hosted zones
Health checks
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Pending requests
Resolver
VPCs
Inbound endpoints
Outbound endpoints
Rules
Back to Hosted Zones
Create Record Set
Import Zone File
Delete Record Set
Test Record Set
Record Set Name
Any Type
Aliases Only
Weighted Only
Displaying 1 to 2 out of 2 Record Sets
Name
Type
Value
Evaluate Target Health
www.aayushi.tk.
NS
ns-1744.awsdns-26.co.uk.
ns-525.awsdns-01.net.
ns-1182.awsdns-19.org.
ns-84.awsdns-10.com.
-
www.aayushi.tk.
SOA
ns-1744.awsdns-26.co.uk. awsdns-hostmaster.ama
-
To get started, click Create Record Set button or click an existing record set.
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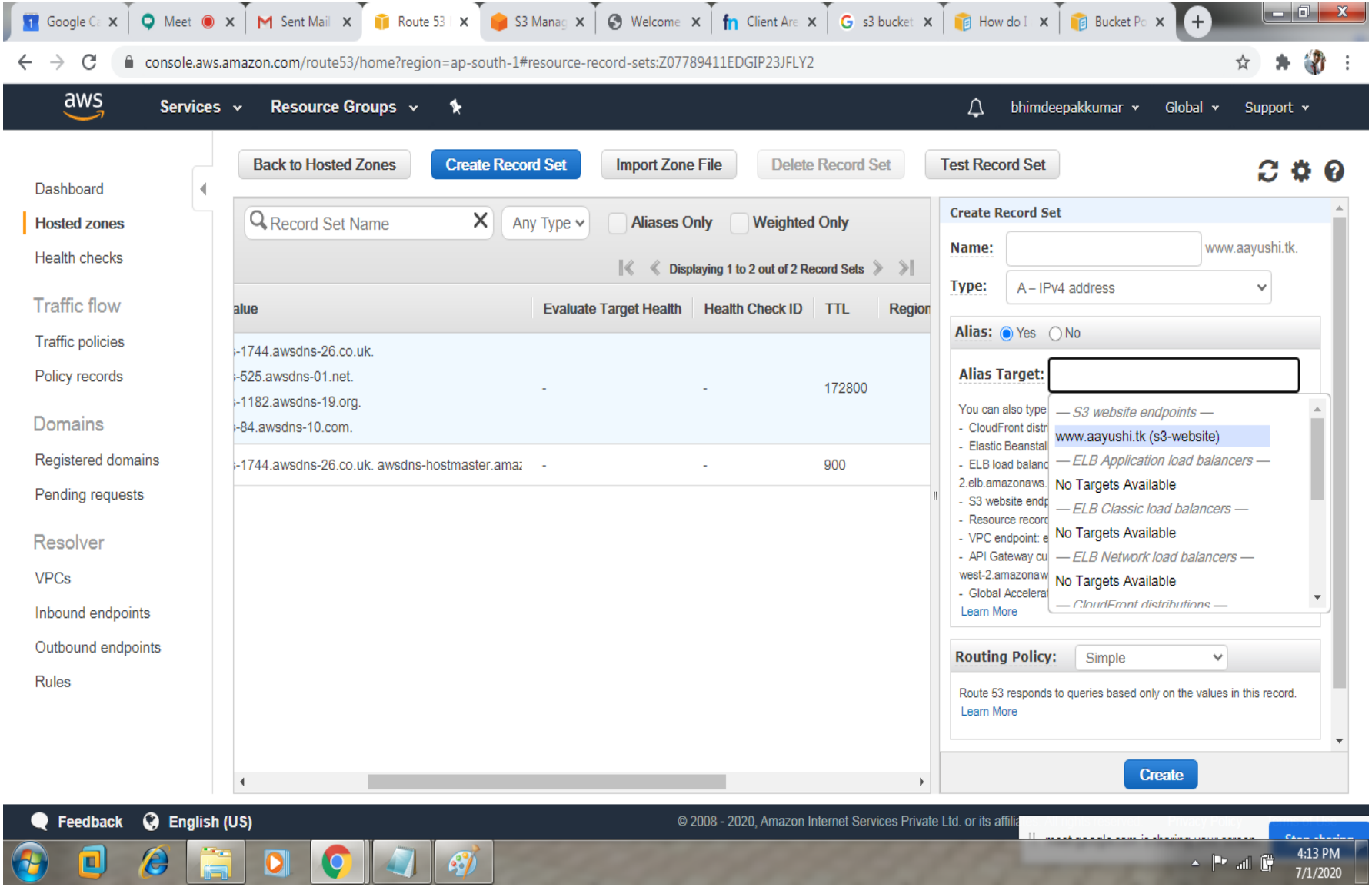
Google C
Meet
Sent Mail
Route 53
S3 Manag
Welcome
Client Are
s3 bucket
How do I
Bucket Po
console.aws.amazon.com/route53/home?region=ap-south-1#resource-record-sets:Z07789411EDGIP23JFLY2
aws
Services
Resource Groups
bhimdeepakkumar
Global
Support
Dashboard
Hosted zones
Health checks
Traffic flow
Traffic policies
Policy records
Domains
Registered domains
Pending requests
Resolver
VPCs
Inbound endpoints
Outbound endpoints
Rules
Back to Hosted Zones
Create Record Set
Import Zone File
Delete Record Set
Test Record Set
Record Set Name
Any Type
Aliases Only
Weighted Only
Displaying 1 to 2 out of 2 Record Sets
alue
Evaluate Target Health
Health Check ID
TTL
Regior
-1744.awsdns-26.co.uk.
-525.awsdns-01.net.
-1182.awsdns-19.org.
-84.awsdns-10.com.
172800
-1744.awsdns-26.co.uk. awsdns-hostmaster.amaz
900
Create Record Set
Name:
www.aayushi.tk.
Type:
A – IPv4 address
Alias:
Yes
No
Alias Target:
— S3 website endpoints —
www.aayushi.tk (s3-website)
— ELB Application load balancers —
No Targets Available
— ELB Classic load balancers —
No Targets Available
— ELB Network load balancers —
No Targets Available
Learn More
Routing Policy:
Simple
Route 53 responds to queries based only on the values in this record.
Learn More
Create
Feedback
English (US)
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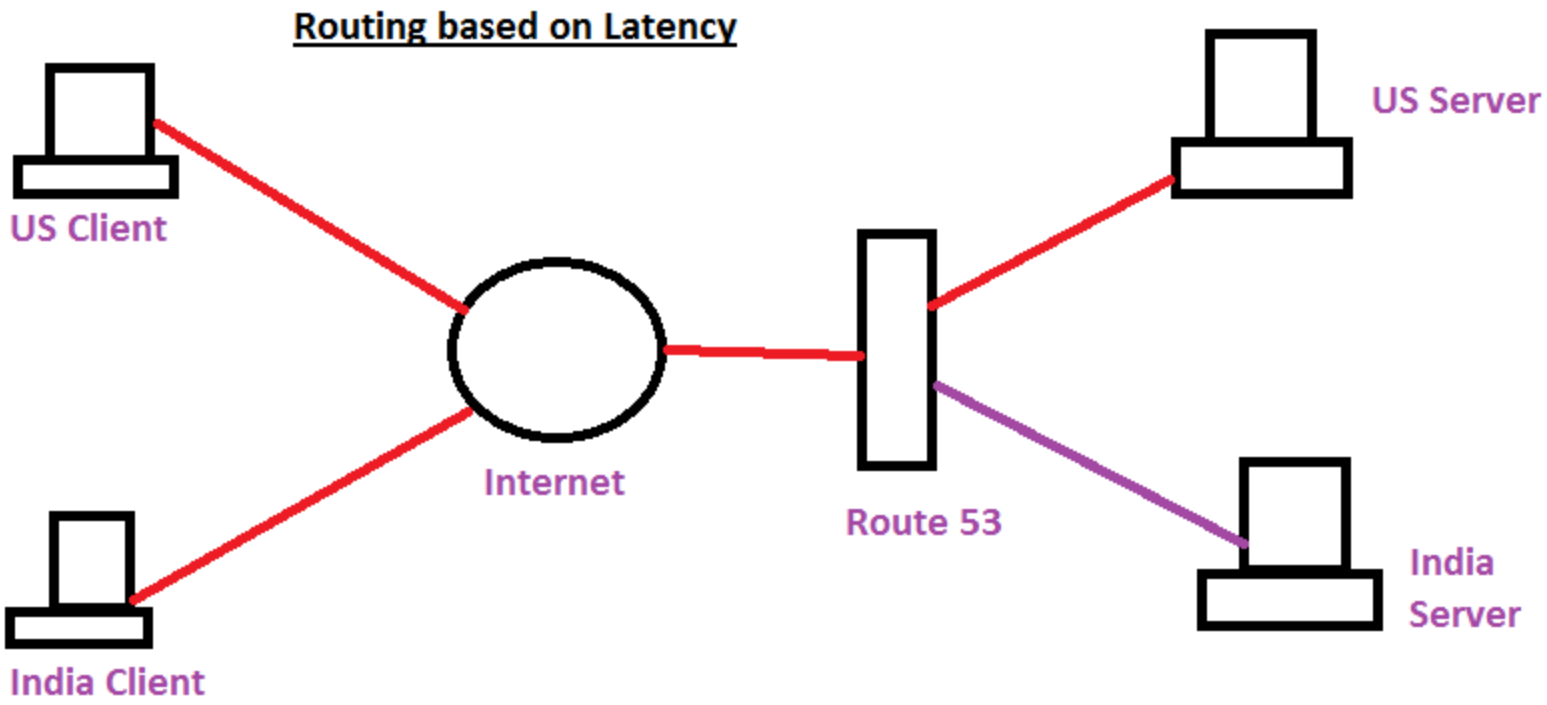
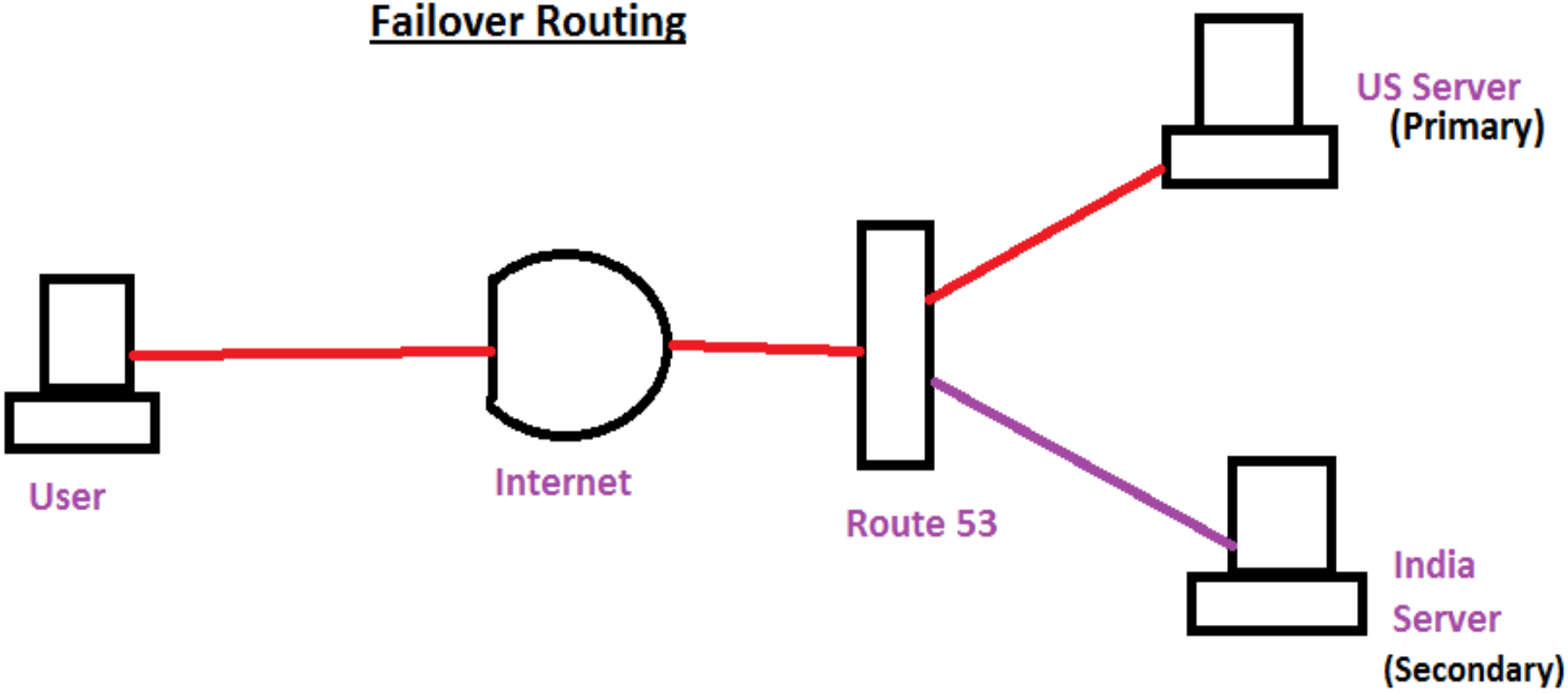
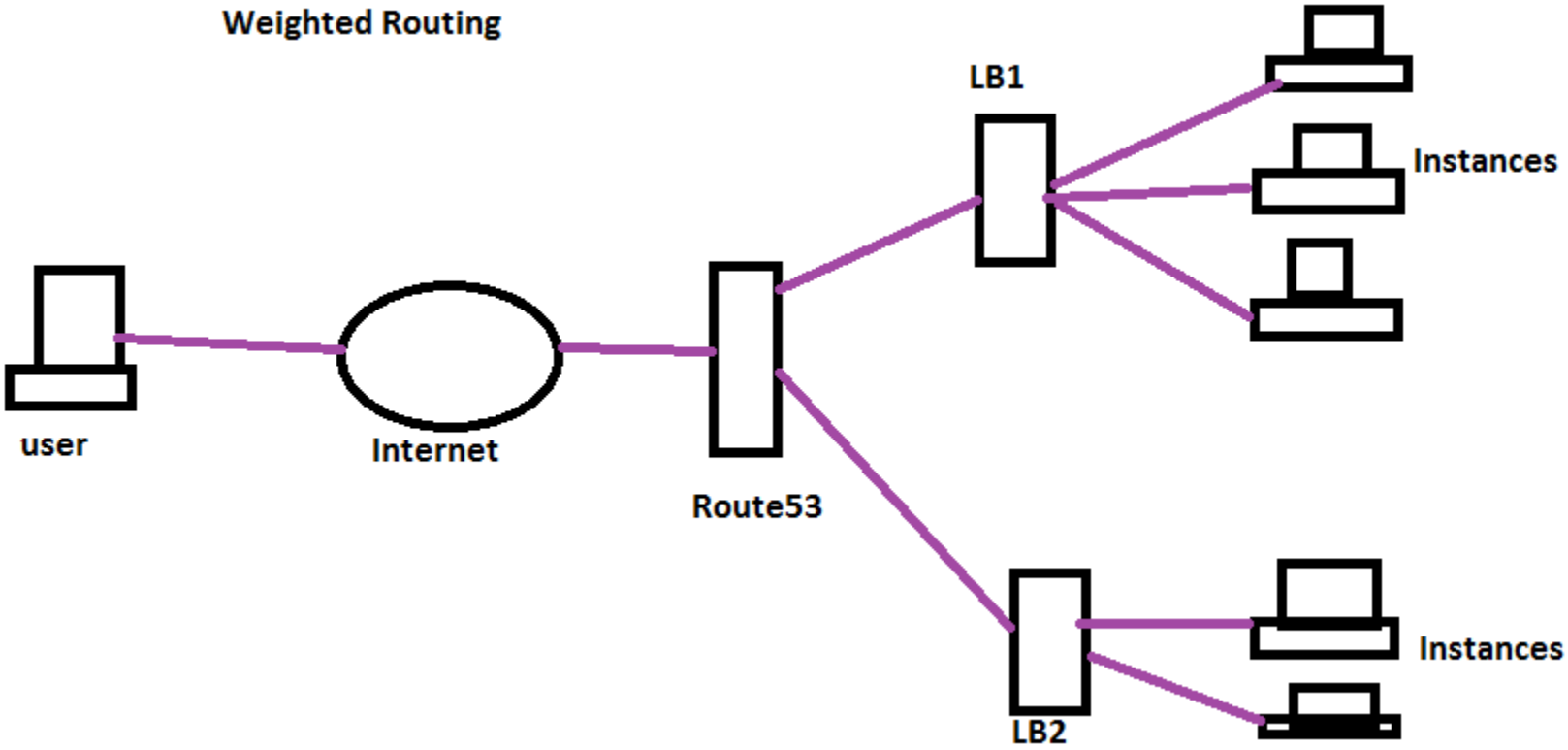
7/1/2020

Architecting Traffic Management with Amazon Route 53

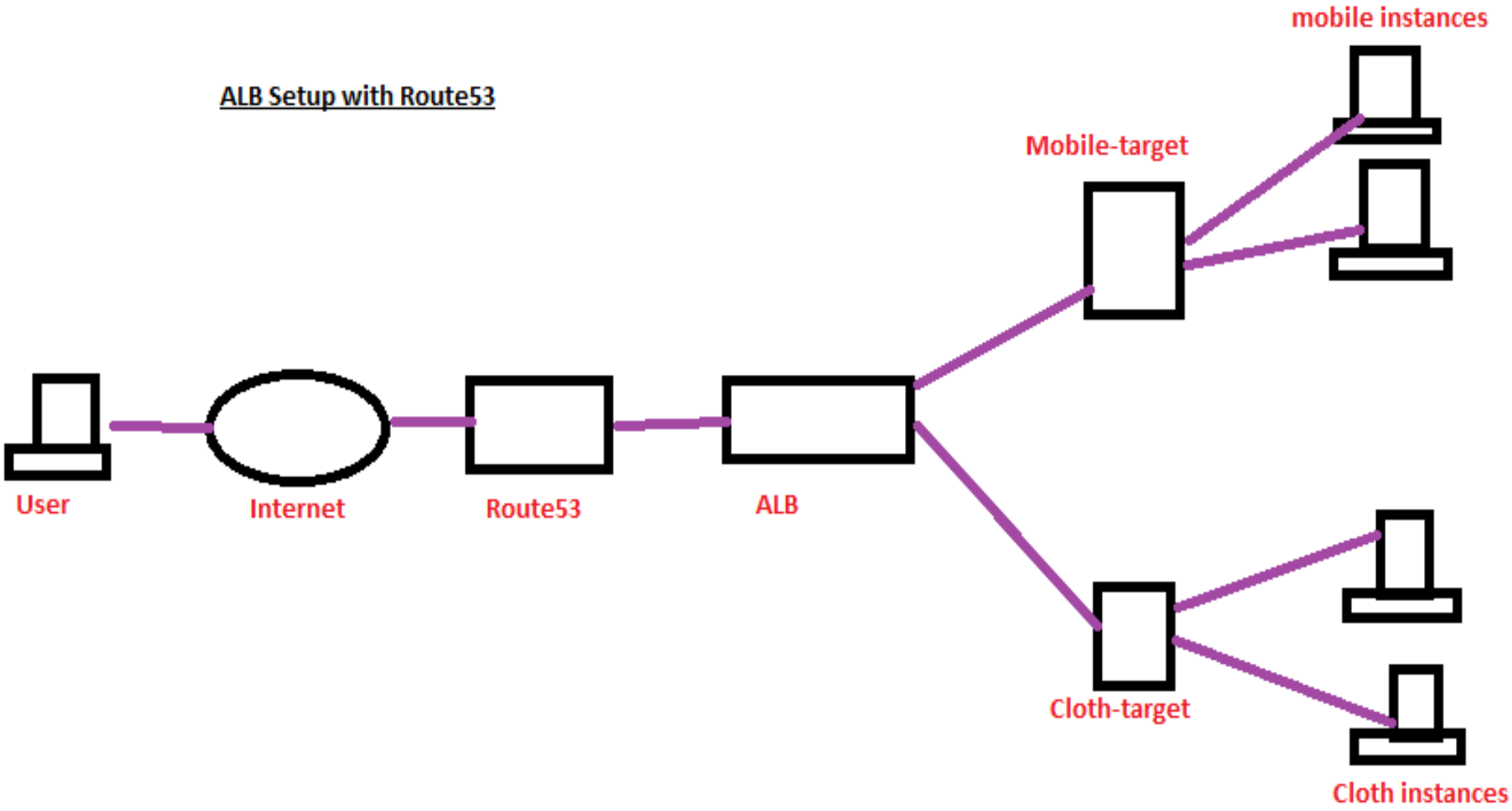
Policy	What it Does
Simple	Simple DNS response providing the IP address associated with a name
Failover	If primary is down (based on health checks), routes to secondary destination
Geolocation	Uses geographic location you're in (e.g. Europe) to route you to the closest region
Geoproximity	Routes you to the closest region within a geographic area
Latency	Directs you based on the lowest latency route to resources
Multivalue answer	Returns several IP addresses and functions as a basic load balancer
Weighted	Uses the relative weights assigned to resources to determine which to route to


Routing based on Latency
US Client
US Server
Internet
Route 53
India Client
India Server


Failover Routing
US Server
(Primary)
User
Internet
Route 53
India
Server
(Secondary)

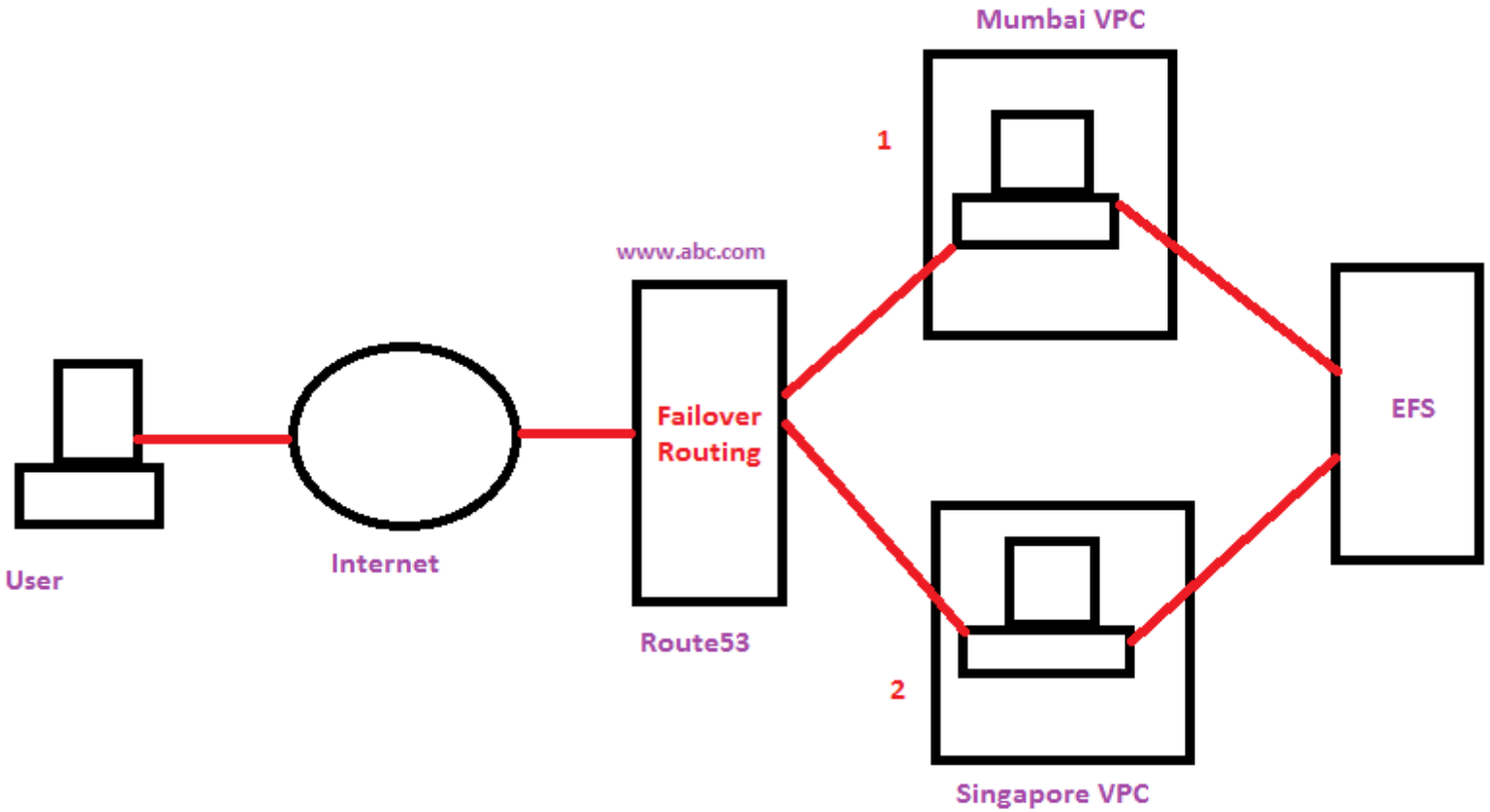

Weighted Routing
LB1
Instances
user
Internet
Route53
Instances
LB2

ALB with Route53 Domain hosting(Use case 1)



Instance disaster recovery (Use case 2)

Inter region Instance Failover configuration(Disaster recovery)



Load Balancer from different region (Use case 3)

Configure Load Balancer from the instances in different region.
The DB should be common location