Cyber security and cloud computing

1. Implementation of S-DES

INPUT:

```
 # Simplified S-DES Example (for educational purposes)

# Initial and final permutations
IP = [1, 5, 2, 0, 3, 7, 4, 6]
IP_inv = [3, 0, 2, 4, 6, 1, 7, 5]

# Key generation - P10, split, shifts, P8
P10 = [2, 4, 1, 6, 3, 9, 0, 8, 7, 5]
P8 = [5, 2, 6, 1, 7, 3, 9, 0]

# S-boxes (substitution)
S0 = [[1, 0, 3, 2], [3, 2, 1, 0], [0, 2, 1, 3], [3, 1, 3, 2]]
S1 = [[0, 1, 2, 3], [2, 0, 3, 1], [3, 0, 1, 2], [2, 1, 0, 3]]

# Example key and plaintext (in binary)
key = '1010000010'  # 10-bit key
plaintext = '01101110'  # 8-bit plaintext

# Function for applying permutation
def permute(bits, permutation):
    return ''.join(bits[i] for i in permutation)

# Function for key generation
def key_generation(key):
    key = permute(key, P10)  # Apply P10 permutation
    left, right = key[:5], key[5:]

    # Left shift 1 and apply P8 to get K1
    left, right = left[1:] + left[0], right[1:] + right[0]
    K1 = permute(left + right, P8)
```

```
# Left shift 2 and apply P8 to get K2
    left, right = left[1:] + left[0], right[1:] + right[0]
    left, right = left[1:] + left[0], right[1:] + right[0]
    K2 = permute(left + right, P8)

    return K1, K2

# Function for S-box substitution
def s_box(bits, sbox):
    row = int(bits[0] + bits[3], 2)
    col = int(bits[1] + bits[2], 2)
    return format(sbox[row][col], '02b')

# Function F - Expansion, S-box substitution, permutation
def f(bits, key):
    left, right = bits[:4], bits[4:]
    expanded = s_box(left + right, S0) + s_box(right + left, S1)  # Example
    return expanded

# Example process
K1, K2 = key_generation(key)
print(f"Subkeys: K1 = {K1}, K2 = {K2}")
```

OUTPUT:

```
Subkeys: K1 = 10100000, K2 = 01000010
```

2. Implementation of S-AES

INPUT:

```
import numpy as np

S-AES S-Box

SBOX = np.array([ [0x9, 0x4, 0xA, 0xB], [0xD, 0x1, 0x8, 0x5], [0x6, 0x2, 0x0, 0x3], [0xC, 0xE, 0xF, ] ])

INV_SBOX = np.array([ [0xA, 0x5, 0x9, 0xB], [0x1, 0x7, 0x8, 0xF], [0x6, 0x0, 0x2, 0x3], [0xC, 0x4,
0xD, 0xE] ])


Galois Field multiplication
```

MULT2 = np.array([0x0, 0x2, 0x4, 0x6, 0x8, 0xA, 0xC, 0xE, 0x3, 0x1, 0x7, 0x5, 0xB, 0x9, 0xF, 0xD]) MULT4 = np.array([0x0, 0x4, 0x8, 0xC, 0x3, 0x7, 0xB, 0xF, 0x6, 0x2, 0xE, 0xA, 0x5, 0x1, 0xD, 0x9]) MULT9 = np.array([0x0, 0x9, 0x2, 0xB, 0x4, 0xD, 0x6, 0xF, 0x8, 0x1, 0xA, 0x3, 0xC, 0x5, 0xE, 0x7])

Key Expansion

RCON = [0x80, 0x30]

def sub_nibble(value): return (SBOX[value >> 4, value & 0xF])

def inv_sub_nibble(value): return (INV_SBOX[value >> 4, value & 0xF])

def key_expansion(key): w = [0] * 6 w[0] = key >> 8 w[1] = key & 0xFF w[2] = w[0] ^ RCON[0] ^ ((sub_nibble(w[1] >> 4) << 4) | sub_nibble(w[1] & 0xF)) w[3] = w[2] ^ w[1] w[4] = w[2] ^ RCON[1] ^ ((sub_nibble(w[3] >> 4) << 4) | sub_nibble(w[3] & 0xF)) w[5] = w[4] ^ w[3] return [(w[i] << 8) | w[i + 1] for i in range(0, 6, 2)]

Encryption process

def add_round_key(state, key): return state ^ key

def sub_nibbles(state): return (sub_nibble(state >> 4) << 4) | sub_nibble(state & 0xF)

def shift_rows(state): return ((state & 0xF0) >> 4) | ((state & 0x0F) << 4)

def mix_columns(state): s0 = (MULT2[state >> 4] ^ MULT4[state & 0xF]) s1 = (MULT4[state >> 4] ^ MULT2[state & 0xF]) return (s0 << 4) | s1

def encrypt(plaintext, key): keys = key_expansion(key) state = add_round_key(plaintext, keys[0]) state = sub_nibbles(state) state = shift_rows(state) state = mix_columns(state) state = add_round_key(state, keys[1]) state = sub_nibbles(state) state = shift_rows(state) state = add_round_key(state, keys[2]) return state

Decryption process

def inv_mix_columns(state): s0 = (MULT9[state >> 4] ^ MULT2[state & 0xF]) s1 = (MULT2[state >> 4] ^ MULT9[state & 0xF]) return (s0 << 4) | s1

def decrypt(ciphertext, key): keys = key_expansion(key) state = add_round_key(ciphertext, keys[2]) state = shift_rows(state) state = sub_nibbles(state) state = add_round_key(state, keys[1]) state = inv_mix_columns(state) state = shift_rows(state) state = sub_nibbles(state) state = add_round_key(state, keys[0]) return state

Example usage

plaintext = 0b1101011100101000 # 16-bit input key = 0b1010011100111011 # 16-bit key

ciphertext = encrypt(plaintext, key) decrypted = decrypt(ciphertext, key)

ciphertext, decrypted

OUTPUT:

- Ciphertext: 0x6D71 (binary: 0b0110110101110001)

- Decrypted plaintext: 0xD728 (binary: 0b1101011100101000)

3. Implementation of Diffie-Hellman key exchange

INPUT: import random

def diffie_hellman(p, g, private_a, private_b): # Compute public keys public_a = pow(g, private_a, p) public_b = pow(g, private_b, p)

Compute shared secret keys

shared_secret_a = pow(public_b, private_a, p)

shared_secret_b = pow(public_a, private_b, p)

return public_a, public_b, shared_secret_a, shared_secret_b

Example input

p = 23 # Prime number g = 5 # Primitive root private_a = random.randint(1, p-1) private_b = random.randint(1, p-1)

Compute keys

public_a, public_b, shared_secret_a, shared_secret_b = diffie_hellman(p, g, private_a, private_b)

Output results

print(f"Prime (p): {p}") print(f"Generator (g): {g}") print(f"Private key of A: {private_a}") print(f"Private key of B: {private_b}") print(f"Public key of A: {public_a}") print(f"Public key of B: {public_b}") print(f"Shared secret (computed by A): {shared_secret_a}") print(f"Shared secret (computed by B): {shared_secret_b}")

OUTPUT: Diffie-Hellman Key Exchange Demo

Prime (p): 23

Generator (g): 5

Private key of A: 12

Private key of B: 7

Public key of A: 3

Public key of B: 17

Shared secret (computed by A): 4

Shared secret (computed by B): 4

Verification: Shared secrets match!

4. Implementation of RSA.

INPUT:

```
 import random
import math
def is_prime(n):
   if n < 2: return False
   for i in range(2, int(math.sqrt(n)) + 1):
       if n % i == 0: return False
   return True
def generate_prime(min_val, max_val):
   prime = random.randint(min_val, max_val)
   while not is_prime(prime):
       prime = random.randint(min_val, max_val)
   return prime
def gcd(a, b):
   while b != 0: a, b = b, a % b
   return a
def modinv(a, m):
   g, x, y = extended_gcd(a, m)
```

```
    if g != 1: return None
    return x % m
def extended_gcd(a, b):
    if a == 0: return (b, 0, 1)
    g, y, x = extended_gcd(b % a, a)
    return (g, x - (b // a) * y, y)
def generate_keys():
    p = generate_prime(100, 1000)
    q = generate_prime(100, 1000)
    while q == p: q = generate_prime(100, 1000)
    n = p * q
    phi = (p-1)*(q-1)
    e = random.randint(2, phi-1)
    while gcd(e, phi) != 1: e = random.randint(2, phi-1)
    d = modinv(e, phi)
    return (e, n), (d, n)
def encrypt(pk, plaintext):
    e, n = pk
    return [pow(ord(char), e, n) for char in plaintext]
def decrypt(pk, ciphertext):
    d, n = pk
    return ''.join([chr(pow(char, d, n)) for char in ciphertext])
if __name__ == '__main__':
    public, private = generate_keys()
    msg = "Hello RSA!"
    enc = encrypt(public, msg)
    dec = decrypt(private, enc)
    print("Public key:", public)
    print("Private key:", private)
```

```
    print("Original:", msg)
    print("Encrypted:", enc)
    print("Decrypted:", dec)
```

OUTPUT:

```
Public key: (65537, 3127)
Private key: (17, 3127)
Original: Hello RSA!
Encrypted: [104, 101, 108, 108, 111, 32, 82, 83, 65, 33]
Decrypted: Hello RSA!
```

5. Implementation of ECC algorithm.

INPUT:

```
 import random
import hashlib
class Point:
    """Represents a point on the elliptic curve"""
    def __init__(self, x, y, curve):
        self.x = x
        self.y = y
        self.curve = curve
        if not curve.is_point_on_curve(self):
            raise ValueError("Point not on the curve")
    def __eq__(self, other):
        return self.x == other.x and self.y == other.y
    def __add__(self, other):
        if self == other:
            return self.double()
        if self.x == float('inf'):
```

```
            return other
        if other.x == float('inf'):
            return self
        if self.x == other.x  return Point(float('inf'), float('inf'), self.curve
        # Calculate slope
        slope = (other.y - self.y) * pow(other.x - self.x, -1, self.curve.p)
        # Calculate new point
        x = (slope**2 - self.x - other.x) % self.curve.p
        y = (slope * (self.x - x) - self.y) % self.curve.p
        return Point(x, y, self.curve)
    def double(self):
        if self.y == 0:
            return Point(float('inf'), float('inf'), self.curve)
        # Calculate slope
        slope = (3 * self.x**2 + self.curve.a) * pow(2 * self.y, -1, self.curve.p)
        # Calculate new point
        x = (slope**2 - 2 * self.x) % self.curve.p
        y = (slope * (self.x - x) - self.y) % self.curve.p
        return Point(x, y, self.curve)
    def __mul__(self, scalar):
        result = Point(float('inf'), float('inf'), self.curve)
        current = self
        while scalar > 0:
            if scalar % 2 == 1:
                result += current
            current = current.double()
            scalar = scalar // 2
        return result
class EllipticCurve:
```

```python
    """Represents an elliptic curve y² = x³ + ax + b over finite field Fp"""
    def __init__(self, p, a, b, G, n):
        self.p = p
        self.a = a
        self.b = b
        self.G = G  # Generator point
        self.n = n  # Order of the generator point
    def is_point_on_curve(self, point):
        if point.x == float('inf') and point.y == float('inf'):
            return True
        left = (point.y ** 2) % self.p
        right = (point.x ** 3 + self.a * point.x + self.b) % self.p
        return left == right
# secp256k1 parameters (Bitcoin's curve)
p = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFEFFFFFC2F
a = 0x0000000000000000000000000000000000000000000000000000000000000000
b = 0x0000000000000000000000000000000000000000000000000000000000000007
Gx = 0x79BE667EF9DCBBAC55A06295CE870B07029BFCDB2DCE28D959F2815B16F81798
Gy = 0x483ADA7726A3C4655DA4FBFC0E1108A8FD17B448A68554199C47D08FFB10D4B8
n = 0xFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFEBAAEDCE6AF48A03BBFD25E8CD0364141
# Create curve and generator point
curve = EllipticCurve(p, a, b, Point(Gx, Gy, None), n)
curve.G.curve = curve  # Set curve reference for generator point
def generate_key_pair():
    """Generate ECC key pair (private key, public key)"""
    private_key = random.randint(1, n-1)
    public_key = curve.G * private_key
    return private_key, public_key
def ecc_encrypt(public_key, message):
```

```python
    """Simple ECC encryption (for demonstration)"""
    k = random.randint(1, n-1)
    c1 = curve.G * k
    c2 = public_key * k
    # In real implementation, we'd use a proper key derivation function
    shared_secret = hashlib.sha256(str(c2.x).encode()).hexdigest()
    encrypted = ''.join([chr(ord(c) ^ int(shared_secret[i%64], 16)) for i, c in enumerate(message)])
    return c1, encrypted
def ecc_decrypt(private_key, c1, encrypted):
    """Simple ECC decryption (for demonstration)"""
    c2 = c1 * private_key
    shared_secret = hashlib.sha256(str(c2.x).encode()).hexdigest()
    decrypted = ''.join([chr(ord(c) ^ int(shared_secret[i%64], 16)) for i, c in enumerate(encrypted)])
    return decrypted

# Example usage
if __name__ == "__main__":
    print("Generating ECC key pair...")
    private_key, public_key = generate_key_pair()
    print(f"Private key: {hex(private_key)}")
    print(f"Public key: ({hex(public_key.x)}, {hex(public_key.y)})")
    message = "Hello ECC!"
    print(f"\nOriginal message: {message}")
    print("\nEncrypting message...")
    c1, encrypted = ecc_encrypt(public_key, message)
    print(f"Cipher point: ({hex(c1.x)}, {hex(c1.y)})")
    print(f"Encrypted message: {encrypted}")
    print("\nDecrypting message...")
    decrypted = ecc_decrypt(private_key, c1, encrypted)
```

```
    print(f"Decrypted message: {decrypted}")
```

OUTPUT:

Generating ECC key pair...

Private key: 0x3a1b2c3d4e5f67890a1b2c3d4e5f67890a1b2c3d4e5f67890a1b2c3d4e5f6789

Public key: (0x7d3e4f5a6b7c8d9e0f1a2b3c4d5e6f7a8b9c0d1e2f3a4b5c6d7e8f9a0b1c2d3, 0x4e5f6a7b8c9d0e1f2a3b4c5d6e7f8a9b0c1d2e3f4a5b6c7d8e9f0a1b2c3d4e5f)

Original message: Hello ECC!

Encrypting message...

Cipher point: (0x5e6f7a8b9c0d1e2f3a4b5c6d7e8f9a0b1c2d3e4f5a6b7c8d9e0f1a2b3c4d5, 0x2f3a4b5c6d7e8f9a0b1c2d3e4f5a6b7c8d9e0f1a2b3c4d5e6f7a8b9c0d1e2f3)

Encrypted message: Ǣɖǂ Ǣ

Decrypting message...

Decrypted message: Hello ECC!

MINI PROJECT ON CYBER SECURITY

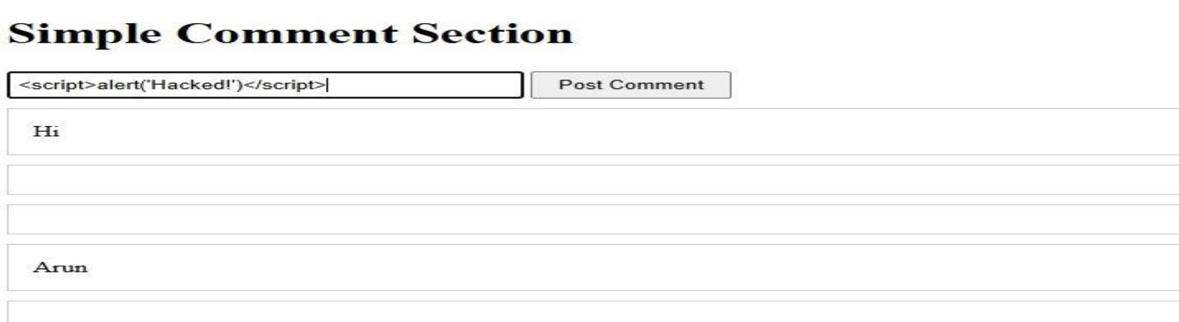
Implement Cross Site Scripting using stored attack. A stored cross site scripting vulnerability in the comment functionality.

none.html > html

```html
<!DOCTYPE html>
<html>
<head>
    <title>XSS Demo (Client-Side)</title>
    <style>
        body { max-width: 800px; margin: 20px auto; padding: 20px; }
        .comment-box { border: 1px solid #ccc; padding: 15px; margin: 10px 0; }
        input[type="text"] { width: 300px; padding: 5px; }
        button { padding: 5px 15px; }
    </style>
</head>
<body>
    <h1>Simple Comment Section</h1>

    <!-- Comment Input -->
    <div>
        <input type="text" id="commentInput" placeholder="Write your comment...">
        <button onclick="saveComment()">Post Comment</button>
    </div>

    <!-- Display Comments -->
    <div id="commentsSection"></div>

    <script>
        // Load comments when page loads
        window.onload = function() {
            loadComments();
        };

        // Save to localStorage
        function saveComment() {
            const comment = document.getElementById('commentInput').value;
            let comments = JSON.parse(localStorage.getItem('comments') || '[]');
            comments.push(comment);
            localStorage.setItem('comments', JSON.stringify(comments));
            loadComments();
            document.getElementById('commentInput').value = '';
        }

        // Display comments UNSAFELY
        function loadComments() {
            const comments = JSON.parse(localStorage.getItem('comments') || '[]');
            const commentsHTML = comments.map(comment =>
                `<div class="comment-box">${comment}</div>`
            ).join('');
            document.getElementById('commentsSection').innerHTML = commentsHTML;
        }
    </script>

    <!-- Hidden Demo Instructions -->
    <!--
        Try this XSS payload:
        <script>alert('XSS Attack!')<\/script>
        <img src=x onerror=alert('Another XSS!')>
    -->
</body>
</html>
```

OUTPUT:


Simple Comment Section
Write your comment...
Post Comment
Hi
Arun


Simple Comment Section
<script>alert('Hacked!')</script>
Post Comment
Hi
Arun

CLOUD COMPUTING

1. Setting up AWS Environment: Create a new AWS account, Secure the root user, Create an IAM user to use in the account Set up the AWS CLI, Set up a Cloud9 environment.

Create a user from AWS Management Console:

To create a user in AWS, we fill out a form and receive an access ID and secret key. At this step, we create a user named cli-user with full access permissions and programmatical access. This user is how we will manage other users later.

Open the IAM console of the AWS Console in a browser window.

Step 1: Select email, account name, and password

To create a new AWS account, go to aws.amazon.com and choose Create an AWS Account.

1.1 - Enter an **email address** and an **account name.**

- Carefully consider which email address you want to use. If you are setting up for a personal account, we don't recommend using a work email address because you may change jobs at some point. Conversely, for business accounts, we recommend using an email alias that can be managed because the person setting up the account may, at some point, change roles or companies.

1.2 - Select **Verify email address**.

- You will get a verification code in your email. Enter the verification code and choose **Verify**.

You will be redirected to a new screen where you will create your root user password.

1.3 - Create your **root user password**.

- The password you choose is extremely sensitive, and should be shared only with people who have access to the credit card that will be used on this account.
- Your password must include: uppercase letters, lowercase letters, numbers, and non-alphabetic characters.

1.4 - Once you have entered and confirmed your password, choose **Continue (step 1 of 5)**.

Step 2: Add contact information

Now you need to add your contact information and select how you plan to use AWS.

2.1 - Choose between a **business** or **personal** account.

- There is no difference in account type or functionality, but there is a difference in the type of information required to open the account for billing purposes.
- For a business account, choose a **phone number** that is tied to the business and can be reached if the person setting up the account is not available.

2.2 - Once you have selected the account type, fill out the the **contact information** about the account.

- Save these details in a safe place. If you ever lose access to the email or your two-factor authentication device, AWS Support can use these details to confirm your identity.

2.3 - At the end of this form, please read through the terms of the AWS Customer Agreement and select the checkbox to accept them.

2.4 - Choose **Continue (step 2 of 5)** to proceed to the next screen.

Step 3: Add a payment method

In the following screen, add your preferred credit or debit card to use for payment.

3.1 - Enter your **Billing Information** details.

- A small hold will be placed on the card, so the address must match what your financial institution has on file for you or your business.

3.2 - Select **Verify and Continue (step 3 of 5)** to proceed.

Step 4: Confirm your identity

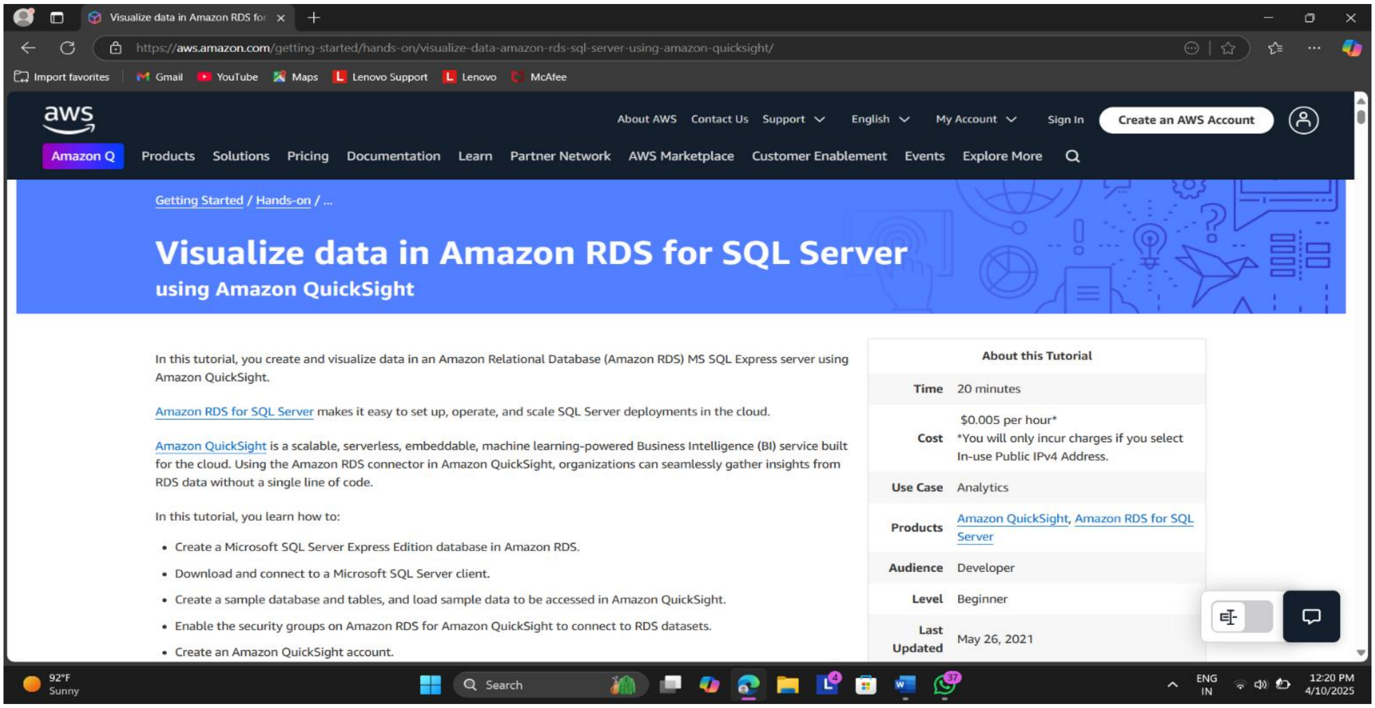
Now you need to verify your account.

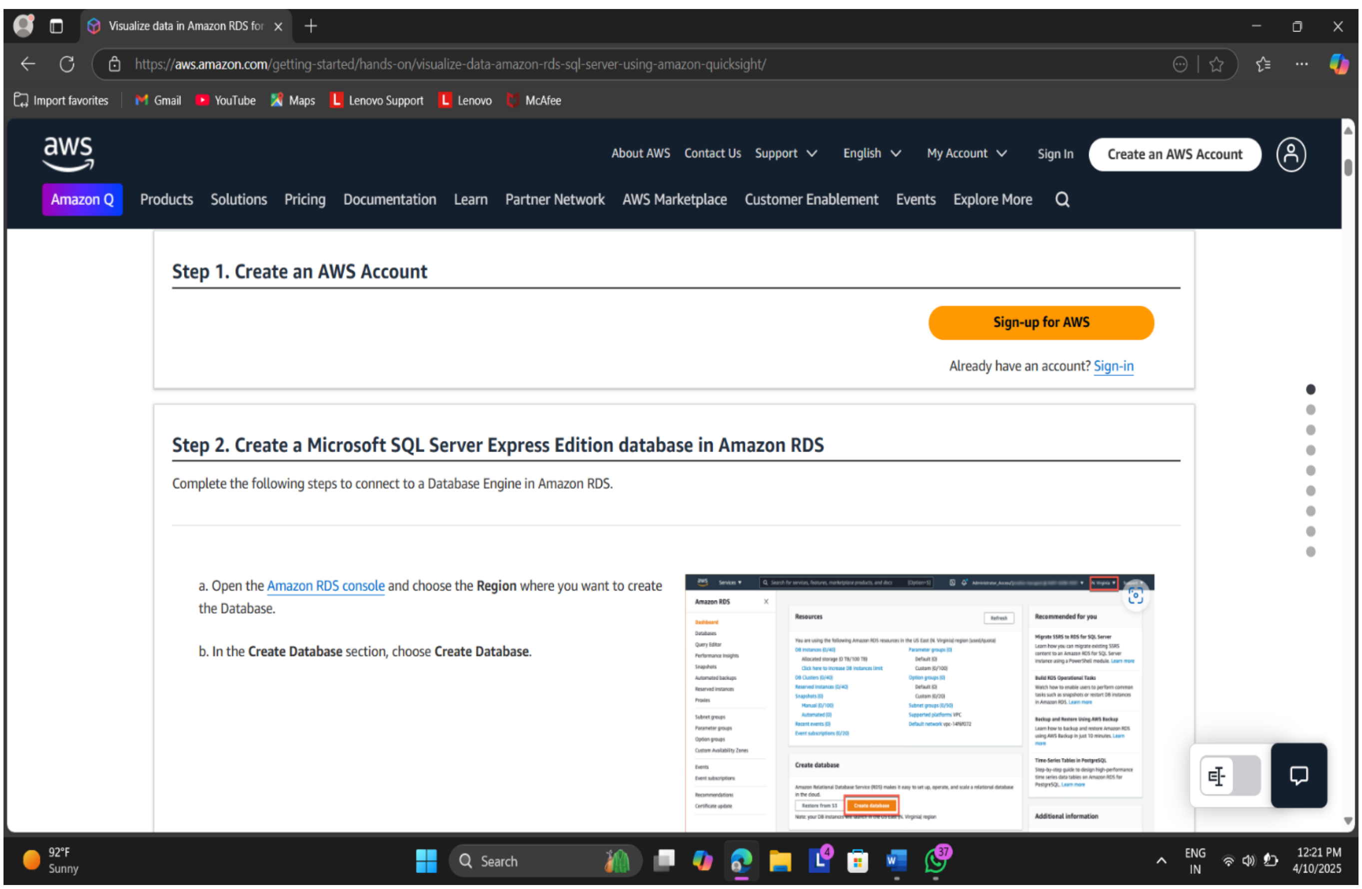
4.1 Choose how you want to **confirm your identity**.

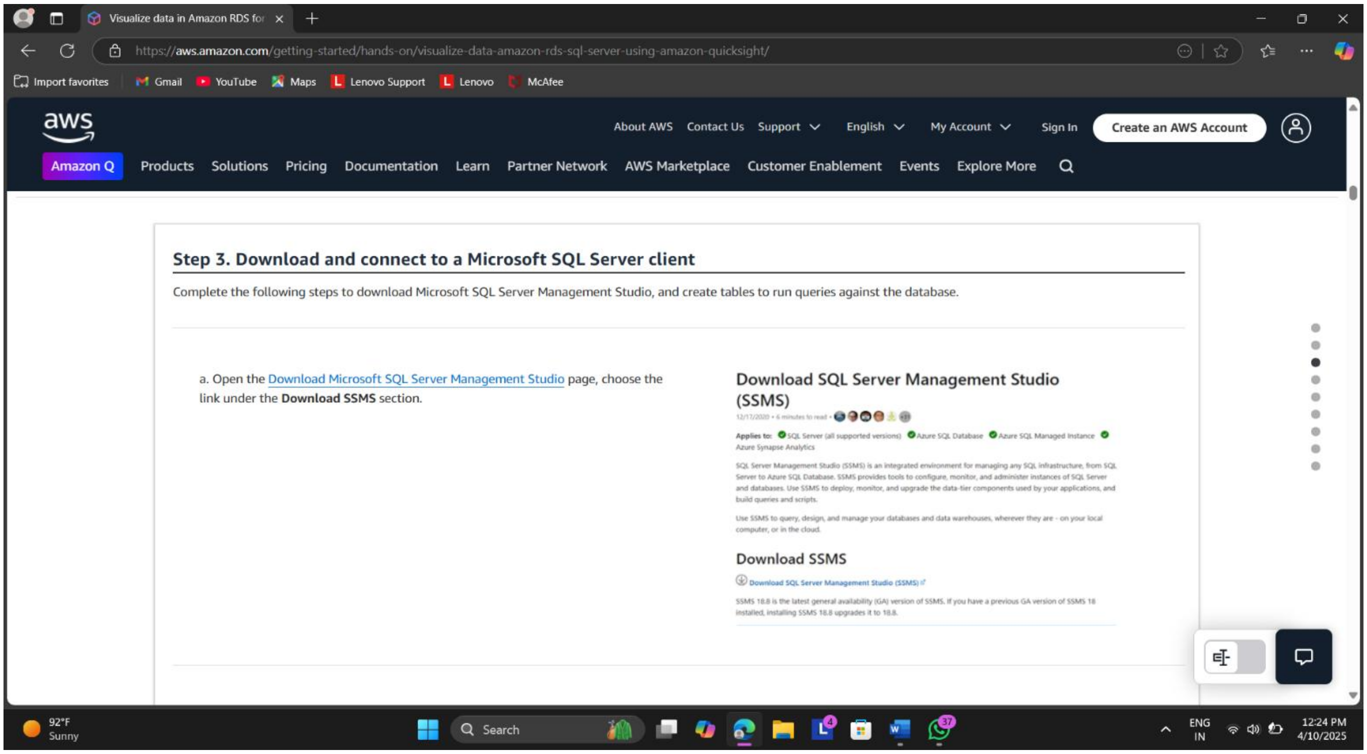
- You can verify your account either through a text message (SMS) or a voice call on the number you are associating with this account.
- For the text message (SMS) option, you will be sent a numeric code to enter on the next screen after you choose **Send SMS.**
- For the **Voice call** option, you will be shown a code on the screen to enter after being prompted by the automated voice verification system.

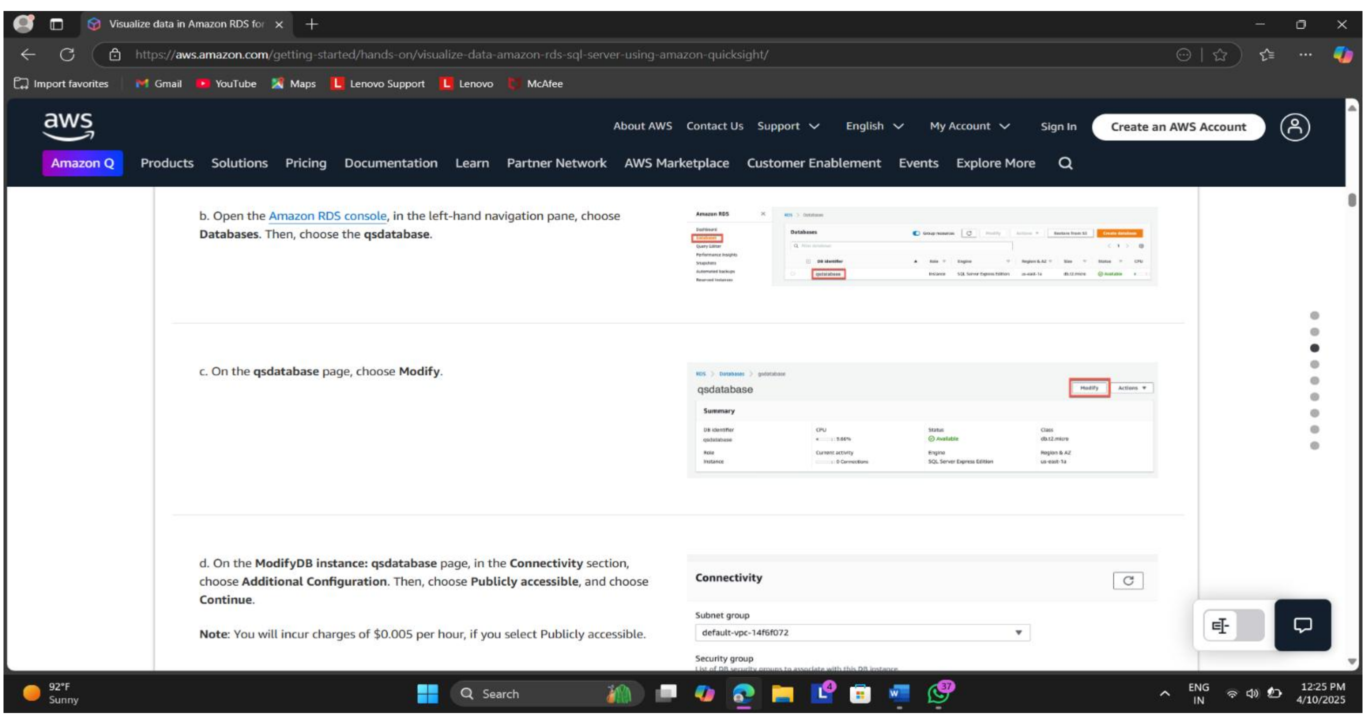
4.2 - Enter the **code** as appropriate for your verification choice, then choose **Continue** to proceed to the final step.

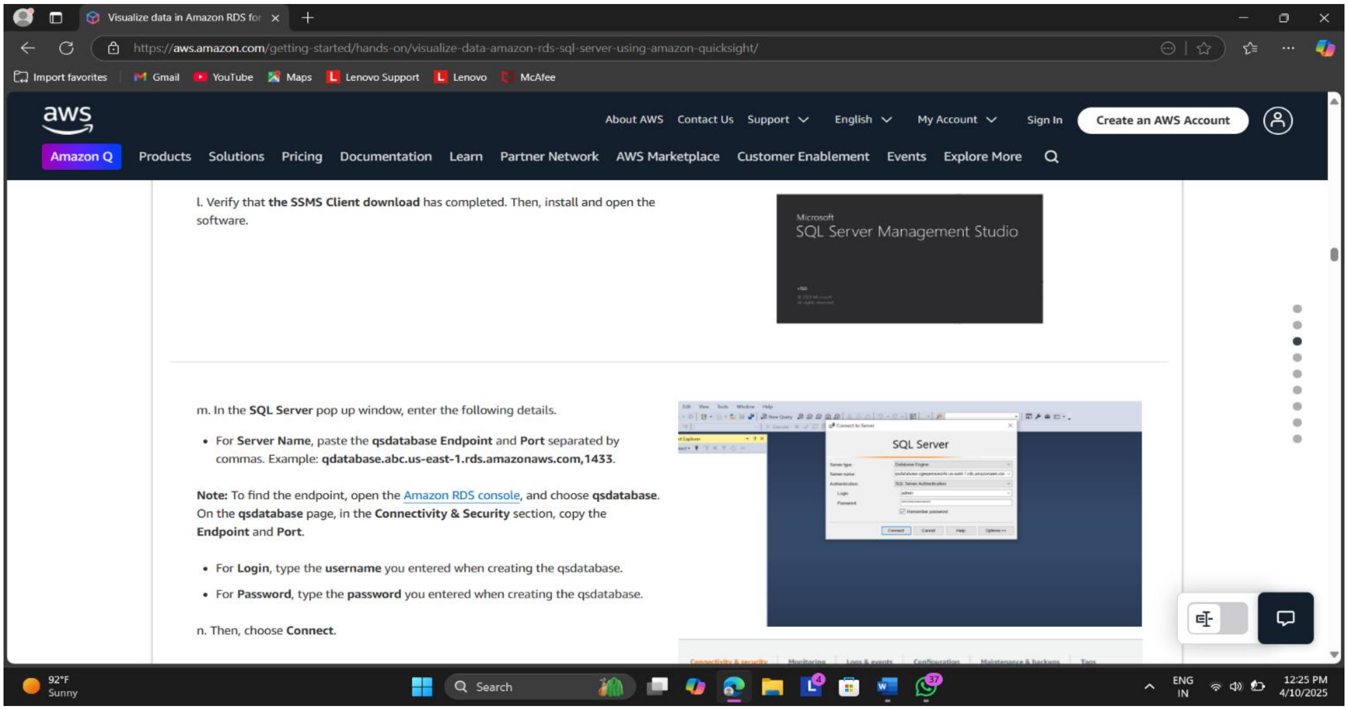
2. Setup, Create and visualize data in an Amazon Relational Database (Amazon RDS) MS SQL Express server using Amazon Quick Sight






Visualize data in Amazon RDS for
https://aws.amazon.com/getting-started/hands-on/visualize-data-amazon-rds-sql-server-using-amazon-quicksight/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
Step 3. Download and connect to a Microsoft SQL Server client
Complete the following steps to download Microsoft SQL Server Management Studio, and create tables to run queries against the database.
a. Open the Download Microsoft SQL Server Management Studio page, choose the link under the Download SSMS section.
Download SQL Server Management Studio (SSMS)
Download SSMS
Download SQL Server Management Studio (SSMS)
92°F
Sunny
Search
ENG
IN
12:24 PM
4/10/2025


Visualize data in Amazon RDS for
https://aws.amazon.com/getting-started/hands-on/visualize-data-amazon-rds-sql-server-using-amazon-quicksight/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
b. Open the Amazon RDS console, in the left-hand navigation pane, choose Databases. Then, choose the qsdatabase.
c. On the qsdatabase page, choose Modify.
qsdatabase
Modify
Actions
Summary
d. On the ModifyDB instance: qsdatabase page, in the Connectivity section, choose Additional Configuration. Then, choose Publicly accessible, and choose Continue.
Note: You will incur charges of $0.005 per hour, if you select Publicly accessible.
Connectivity
Subnet group
default-vpc-14f6f072
Security group
92°F
Sunny
Search
ENG
IN
12:25 PM
4/10/2025



l. Verify that **the SSMS Client download** has completed. Then, install and open the software.

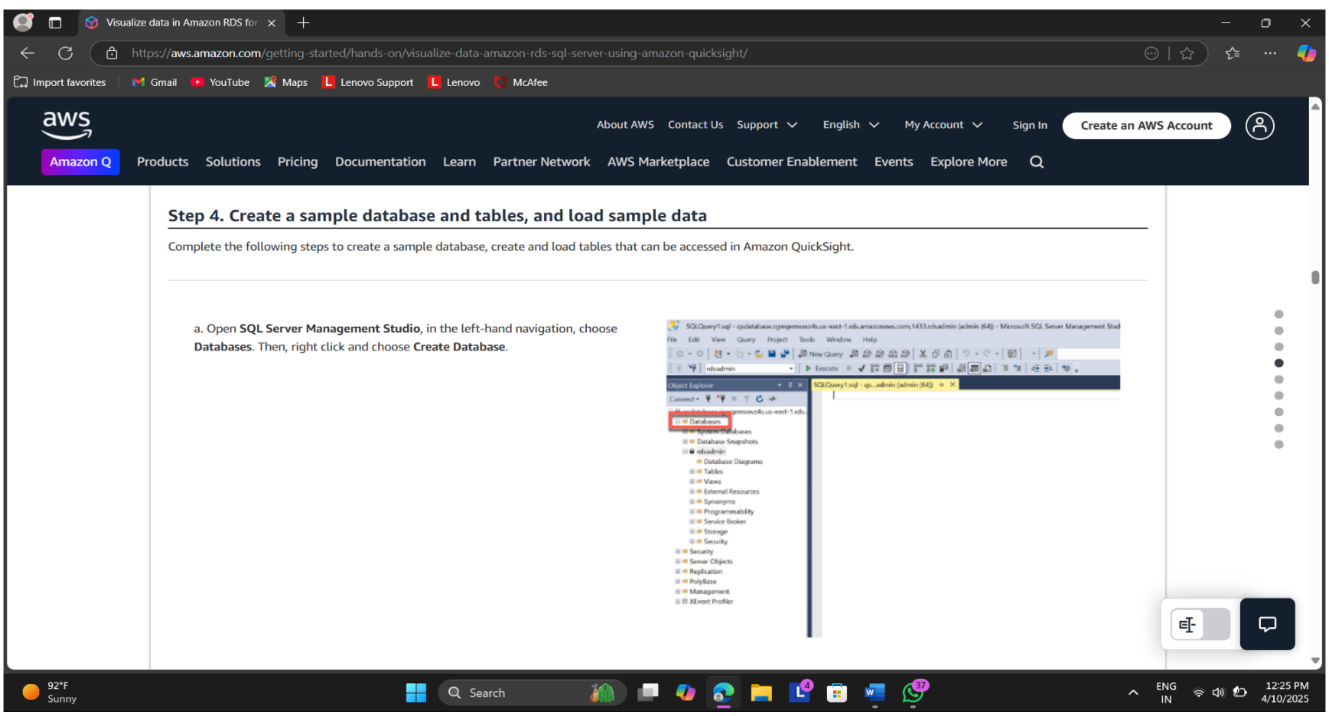
m. In the **SQL Server** pop up window, enter the following details.

- For **Server Name**, paste the **qsdatabase Endpoint** and **Port** separated by commas. Example: **qdatabase.abc.us-east-1.rds.amazonaws.com,1433**.

Note: To find the endpoint, open the Amazon RDS console, and choose **qsdatabase**. On the **qsdatabase** page, in the **Connectivity & Security** section, copy the **Endpoint** and **Port**.

- For **Login**, type the **username** you entered when creating the qsdatabase.
- For **Password**, type the **password** you entered when creating the qsdatabase.

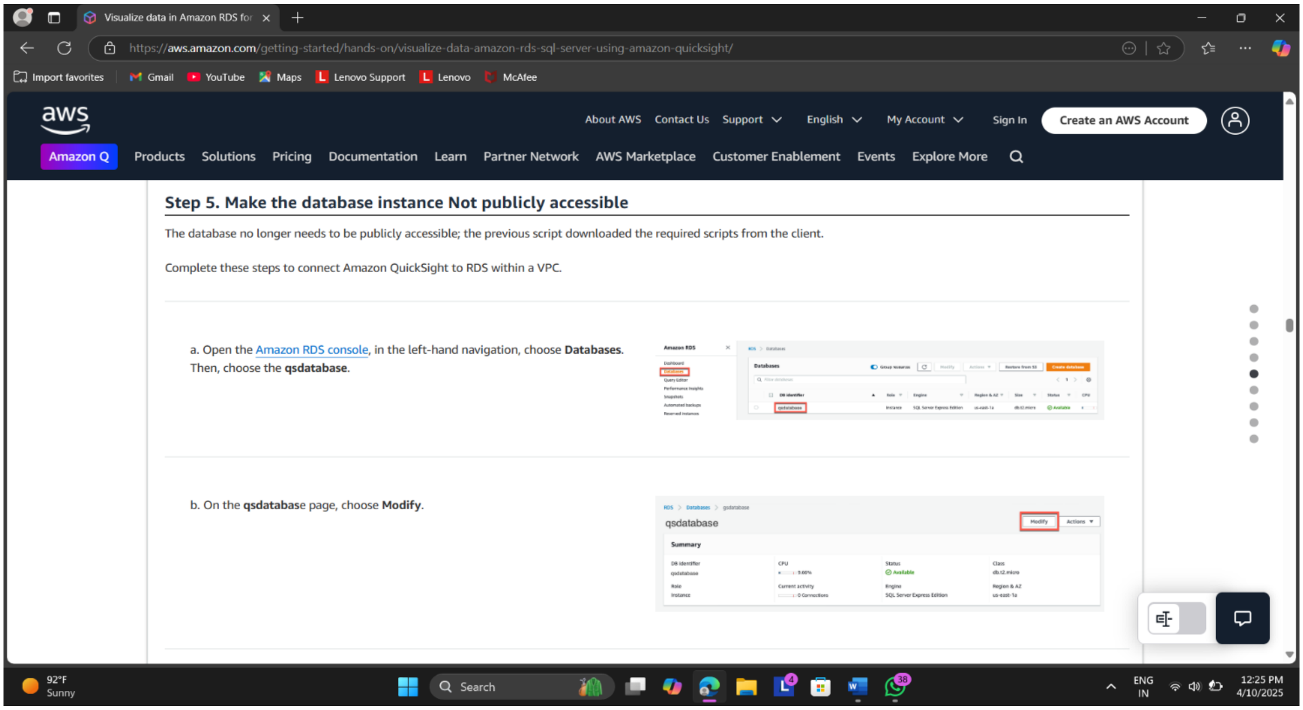
n. Then, choose **Connect**.

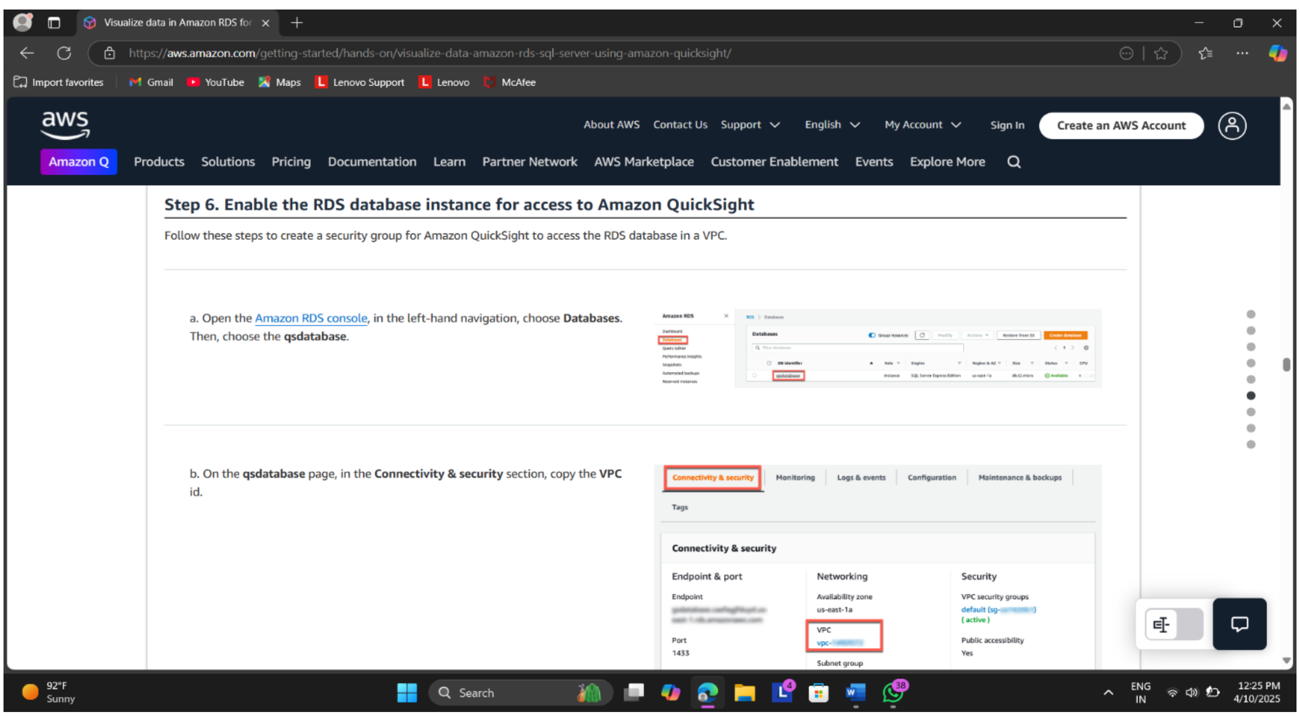


Step 4. Create a sample database and tables, and load sample data

Complete the following steps to create a sample database, create and load tables that can be accessed in Amazon QuickSight.

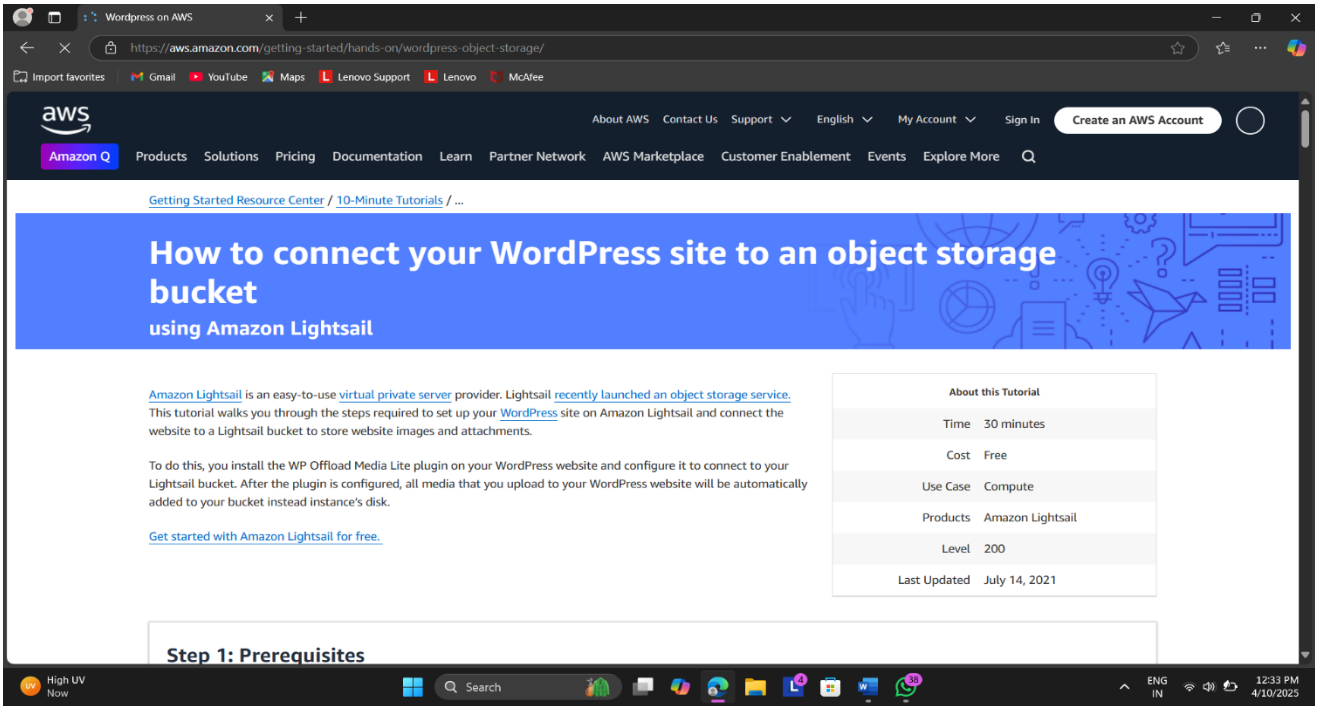
a. Open **SQL Server Management Studio**, in the left-hand navigation, choose **Databases**. Then, right click and choose **Create Database**.

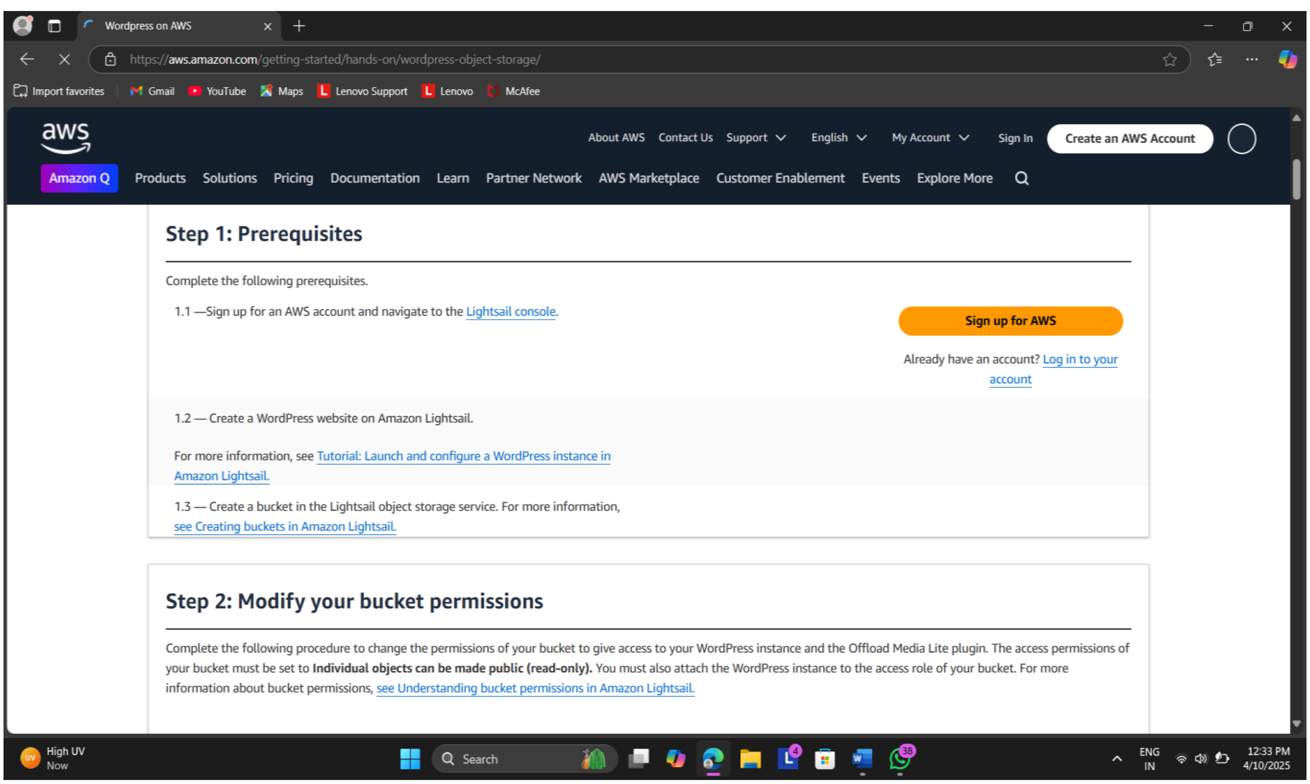

Visualize data in Amazon RDS for
https://aws.amazon.com/getting-started/hands-on/visualize-data-amazon-rds-sql-server-using-amazon-quicksight/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
Step 5. Make the database instance Not publicly accessible
The database no longer needs to be publicly accessible; the previous script downloaded the required scripts from the client.
Complete these steps to connect Amazon QuickSight to RDS within a VPC.
a. Open the Amazon RDS console, in the left-hand navigation, choose Databases. Then, choose the qsdatabase.
b. On the qsdatabase page, choose Modify.
qsdatabase
Modify
Actions
Summary
92°F
Sunny
Search
ENG
IN
12:25 PM
4/10/2025

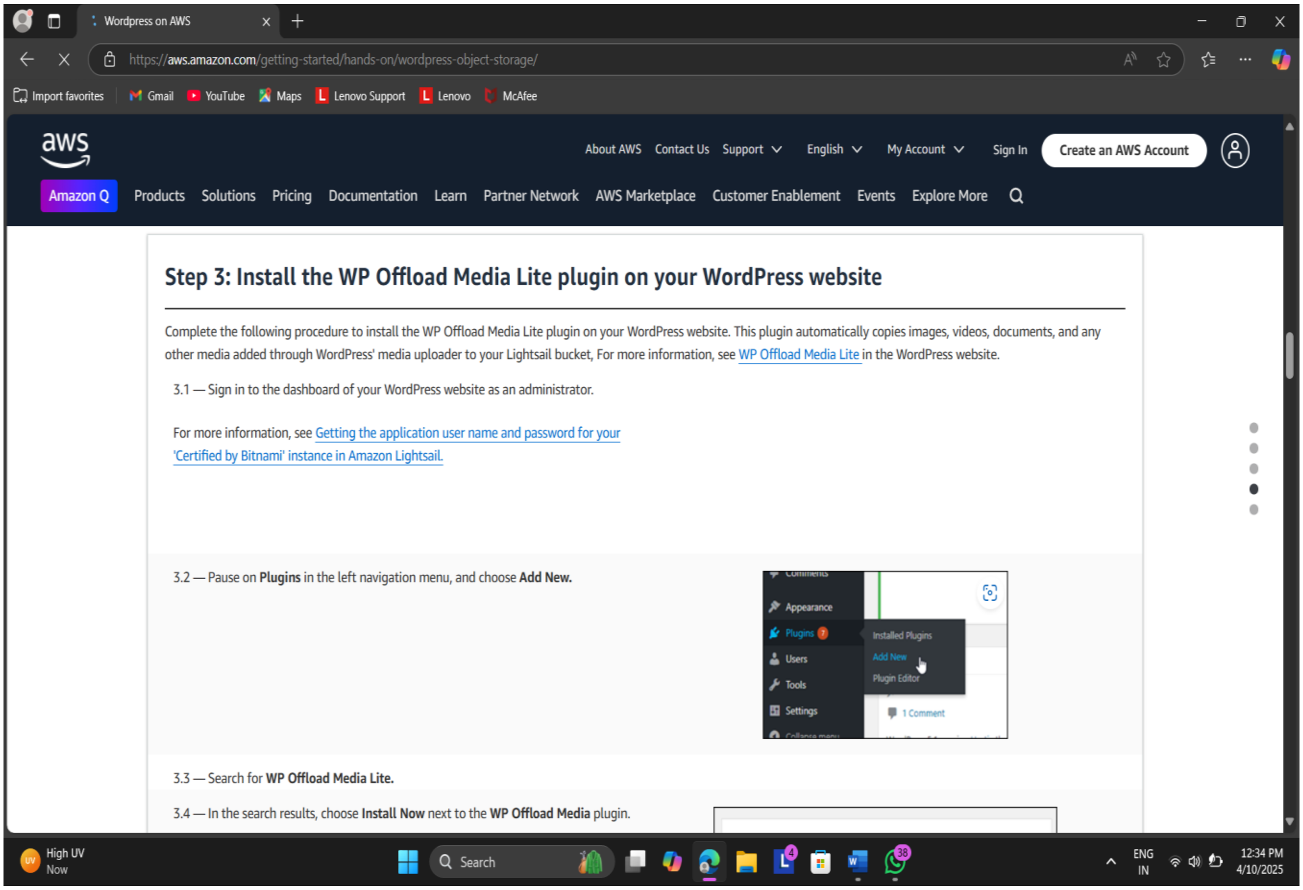

Visualize data in Amazon RDS for
https://aws.amazon.com/getting-started/hands-on/visualize-data-amazon-rds-sql-server-using-amazon-quicksight/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
Step 6. Enable the RDS database instance for access to Amazon QuickSight
Follow these steps to create a security group for Amazon QuickSight to access the RDS database in a VPC.
a. Open the Amazon RDS console, in the left-hand navigation, choose Databases. Then, choose the qsdatabase.
b. On the qsdatabase page, in the Connectivity & security section, copy the VPC id.
Connectivity & security
Monitoring
Logs & events
Configuration
Maintenance & backups
Tags
Connectivity & security
Endpoint & port
Networking
Security
Endpoint
Availability zone
us-east-1a
VPC security groups
VPC
Port
1433
Public accessibility
Yes
Subnet group
92°F
Sunny
Search
ENG
IN
12:25 PM
4/10/2025

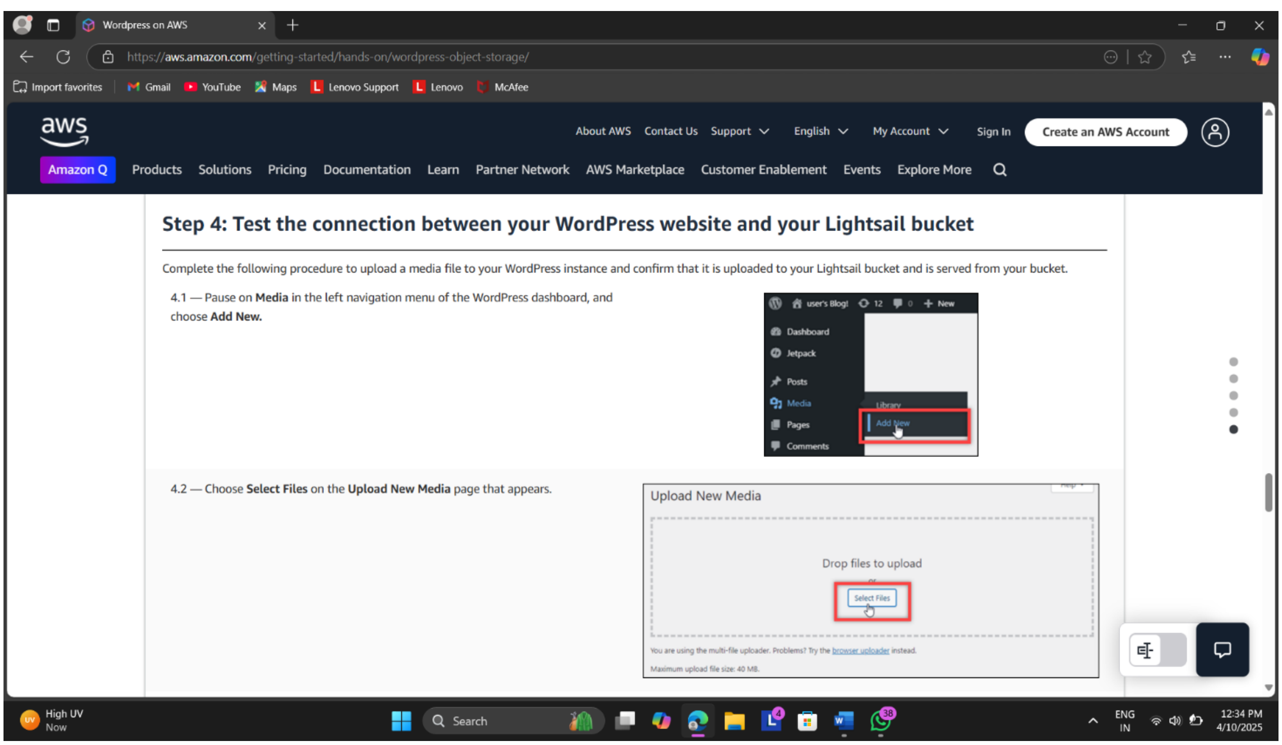
•

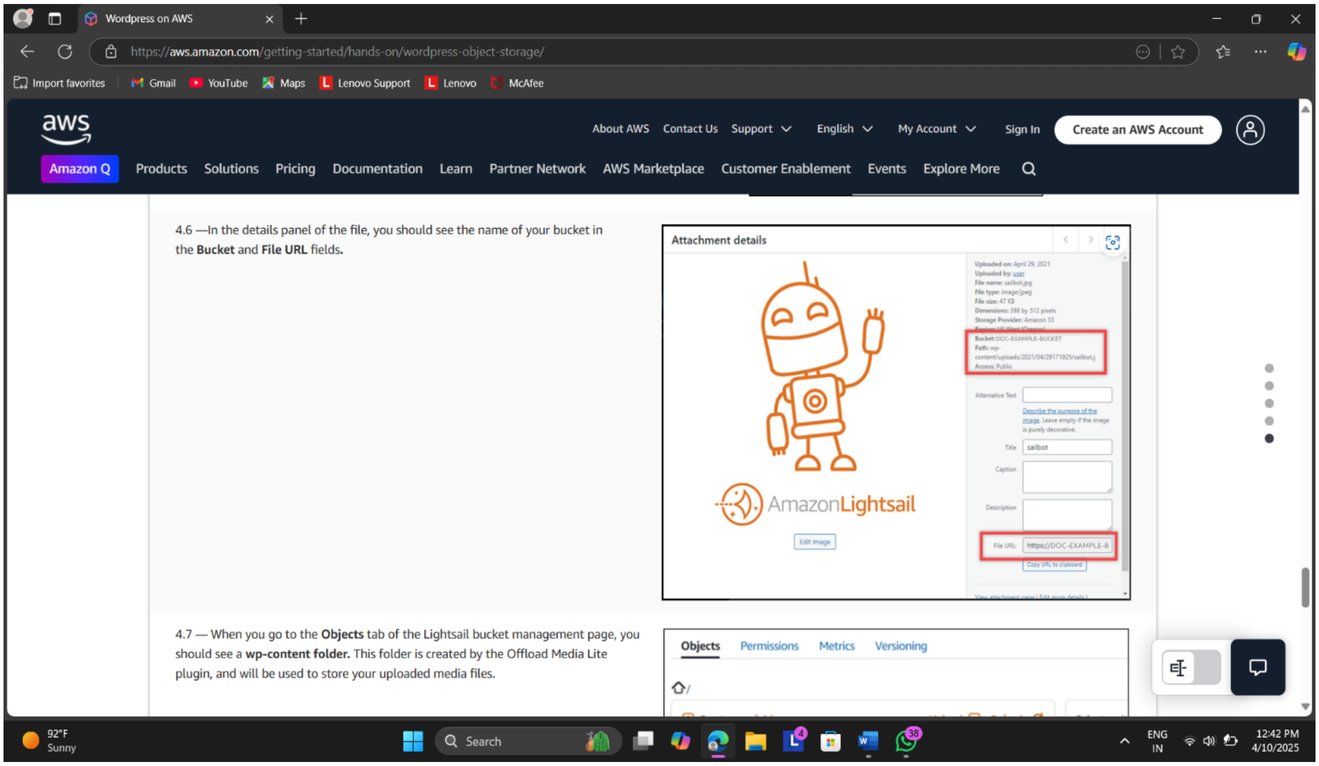
3. Setup, Create and connect your Word Press site to an object storage bucket using LightSail service.

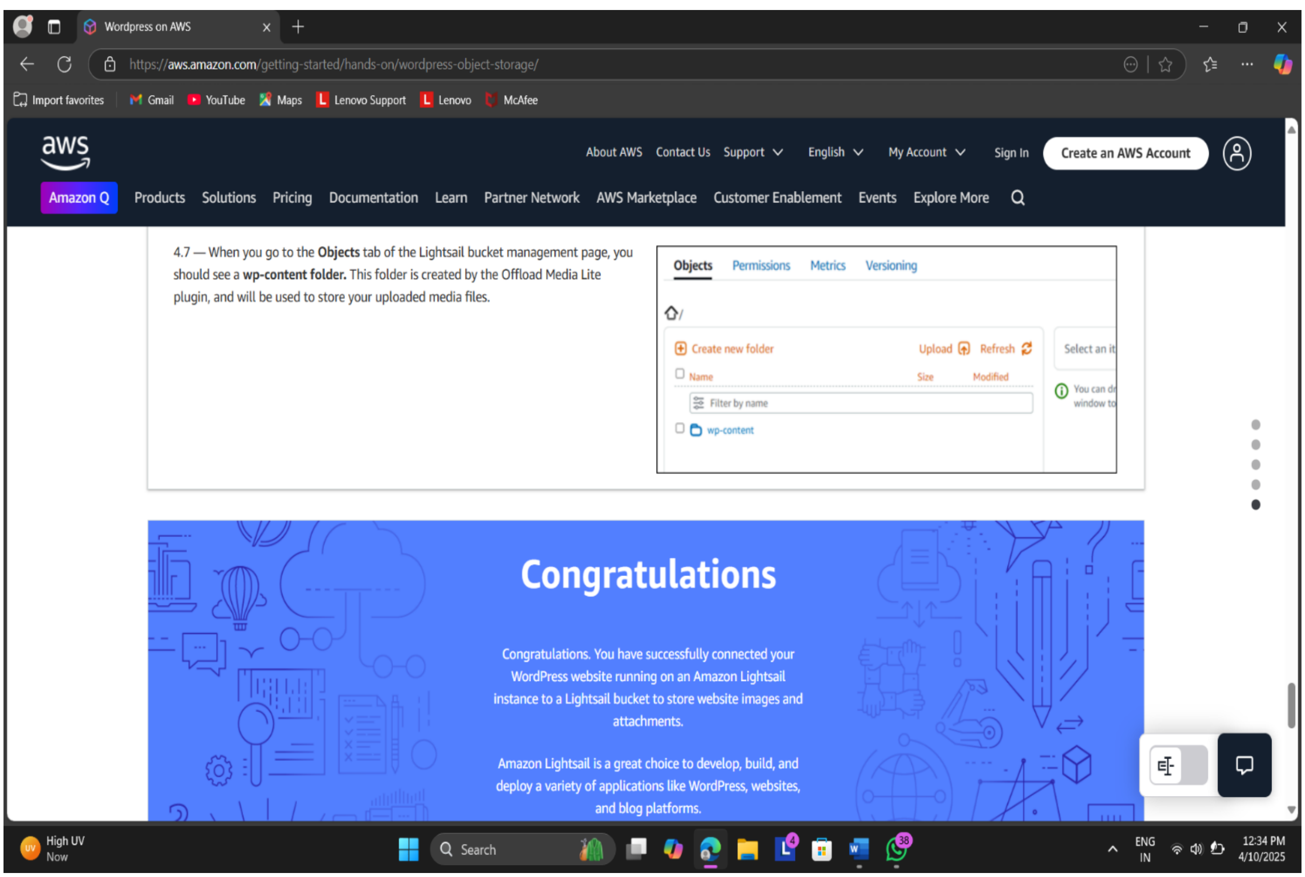





Wordpress on AWS
https://aws.amazon.com/getting-started/hands-on/wordpress-object-storage/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
aws
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
Step 3: Install the WP Offload Media Lite plugin on your WordPress website
Complete the following procedure to install the WP Offload Media Lite plugin on your WordPress website. This plugin automatically copies images, videos, documents, and any other media added through WordPress' media uploader to your Lightsail bucket, For more information, see WP Offload Media Lite in the WordPress website.
3.1 — Sign in to the dashboard of your WordPress website as an administrator.
For more information, see Getting the application user name and password for your 'Certified by Bitnami' instance in Amazon Lightsail.
3.2 — Pause on Plugins in the left navigation menu, and choose Add New.
Appearance
Plugins
Users
Tools
Settings
Installed Plugins
Add New
Plugin Editor
1 Comment
3.3 — Search for WP Offload Media Lite.
3.4 — In the search results, choose Install Now next to the WP Offload Media plugin.
High UV
Now
Search
ENG
IN
12:34 PM
4/10/2025


Wordpress on AWS
https://aws.amazon.com/getting-started/hands-on/wordpress-object-storage/
Import favorites
Gmail
YouTube
Maps
Lenovo Support
Lenovo
McAfee
aws
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
Step 4: Test the connection between your WordPress website and your Lightsail bucket
Complete the following procedure to upload a media file to your WordPress instance and confirm that it is uploaded to your Lightsail bucket and is served from your bucket.
4.1 — Pause on Media in the left navigation menu of the WordPress dashboard, and choose Add New.
Dashboard
Jetpack
Posts
Media
Pages
Comments
Library
Add New
4.2 — Choose Select Files on the Upload New Media page that appears.
Upload New Media
Drop files to upload
Select Files
High UV
Now
Search
ENG
IN
12:34 PM
4/10/2025


Wordpress on AWS
https://aws.amazon.com/getting-started/hands-on/wordpress-object-storage/
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
4.6 —In the details panel of the file, you should see the name of your bucket in the Bucket and File URL fields.
Attachment details
AmazonLightsail
4.7 — When you go to the Objects tab of the Lightsail bucket management page, you should see a wp-content folder. This folder is created by the Offload Media Lite plugin, and will be used to store your uploaded media files.
Objects
Permissions
Metrics
Versioning
92°F
Sunny
12:42 PM
4/10/2025


Wordpress on AWS
https://aws.amazon.com/getting-started/hands-on/wordpress-object-storage/
About AWS
Contact Us
Support
English
My Account
Sign In
Create an AWS Account
Amazon Q
Products
Solutions
Pricing
Documentation
Learn
Partner Network
AWS Marketplace
Customer Enablement
Events
Explore More
4.7 — When you go to the Objects tab of the Lightsail bucket management page, you should see a wp-content folder. This folder is created by the Offload Media Lite plugin, and will be used to store your uploaded media files.
Objects
Permissions
Metrics
Versioning
Create new folder
Upload
Refresh
Name
Size
Modified
Filter by name
wp-content
Congratulations
Congratulations. You have successfully connected your WordPress website running on an Amazon Lightsail instance to a Lightsail bucket to store website images and attachments.
Amazon Lightsail is a great choice to develop, build, and deploy a variety of applications like WordPress, websites, and blog platforms.
High UV
Now
12:34 PM
4/10/2025