

Project :

* Title - AWS S3 Bucket Setup & Secure Data Transfer (SFTP)

* Introduction :

This mini-project, AWS S3 Bucket Setup & Secure Data Transfer (SFTP), demonstrates how to securely store and transfer data using cloud services and industry-standard protocols. The implementation ensures scalability, reliability, and strong security for handling files.

* Tools & Technologies Used :

- AWS Console
- PuttyGen
- FileZilla
- S3 Bucket
- IAM Roles & Policies

* Step-by-Step Procedure:

1. Create a Public S3 Bucket
2. Attach a Bucket Policy
3. Create Transfer Server (SFTP)
4. Create IAM Role
5. Generate Keys using PuttyGen (Public & Private Keys)
6. Add User and Assign Permissions
7. Provide Server Credentials to Customer
8. Use File Zilla to Connect and Upload Files

* Challenges Faced & Solutions:

- * Key generation errors → Solved by PuttyGen configuration

* References:

- AWS Documentation links
- Tutorials or articles followed

* Learning :

- Benefits of using AWS S3 + SFTP.
- How to add files in bucket using File Zilla.

1) Created Public bucket & attaching Bucket policy to the bucket :

AWS Policy Generator

The AWS Policy Generator is a tool that enables you to create policies that control access to [Amazon Web Services \(AWS\)](#) products and resources. For more information about creating policies, [key concepts in Using AWS Identity and Access Management](#).

Step 1: Select policy type

A Policy is a container for permissions. The different types of policies you can create are an [IAM Policy](#), an [S3 Bucket Policy](#), an [SNS Topic Policy](#), a [VPC Endpoint Policy](#), and an [SQS Queue Policy](#).

Type of Policy

S3 Bucket Policy

Step 2: Add statement(s)

A statement is the formal description of a single permission. See [a description of elements](#) that you can use in statements.

Effect

☒ Allow

☐ Deny

Principal

*

Use a comma to separate multiple values.

Actions

☐ All Actions (***)

—Select Actions—

GetObject X ListBucket X PutObject X

Policy code ->

Policy

```
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid": "Statement1",
6       "Effect": "Allow",
7       "Principal": "*",
8       "Action": [
9         "s3:GetObject",
10        "s3:ListBucket",
11        "s3:PutObject"
12      ],
13      "Resource": ["arn:aws:s3:::transfer-bkt-project", "arn:aws:s3:::transfer-bkt-project/*"],
14      "Condition": {
15        "IpAddress": {
16          "aws:SourceIp": "152.56.10.246"
17        }
18      }
19    }
20  ]
21 }
```

Statement ->

Statements added (1)					
You added the following statements. Click the button below to Generate a policy.					
Principal(s)	Effect	Action	Resource(s)	Condition(s)	Remove
*	Allow	s3:GetObject s3:ListBucket s3:PutObject	arn:aws:s3:::transfer-bkt-project	None	Remove

2) Created server :

Successfully created server s-9f93828d816744328. Next, add users to enable access to your server.

No users added

One or more servers using Service Managed authentication has no users created. Add users to enable access.

Servers (1)

Actions Test Add user Create server

Name

Hostname

Server ID

State

Service managed users

Endpoint type

Domain

-

-

[s-9f93828d816744328](#)

Starting

No users

Public

Amazon S3

3) User Configuration:

User configuration

Username

Username that is unique within this server

Raj

The username must be from 3 to 100 characters. Valid characters are a-z, A-Z, 0-9, underscore, hyphen, at sign and period. Cannot start with a hyphen, at sign or period.

Role Info

IAM Role for Amazon S3 access

Transfer-role

Policy Info

Session policy to apply to the user

None

Existing policy

Select a policy from IAM

Auto-generate policy based on home folder

View

Home directory

User's login directory

transfer-bkt-project

Raj

Then User added ->

Successfully created user Raj

s-9f93828d816744328

Test View logs Actions

Protocols

Protocols over which clients can connect to your server's endpoint

SFTP

Identity provider

Identity provider type

Service managed

Endpoint details

Name

No name

Status

Online

Endpoint type

Public

IP address type

IPv4

Custom hostname

-

Endpoint

s-9f93828d816744328.server.transfer.ap-south-1.amazonaws.com

FIPS enabled

No

Dual-stack endpoint

-

4) Download File Zilla :



FileZilla

The free FTP solution

Home

- FileZilla
 - Features
 - Screenshots
 - Download
 - Documentation
 - FileZilla Pro
 - RemoteDrive
- FileZilla Server
 - Download
- Community
 - Forum
 - Wiki
- General
 - FAQ
 - Support
 - Contact
 - License
 - Privacy Policy
 - Trademark Policy
- Development
 - Source code
 - Nightly builds
 - Translations
 - Version history
 - Changelog
 - Issue tracker

Promotion:



FileZilla® Pro

The Best FTP Solution



Download FileZilla Client for Windows (64bit x86)

The latest stable version of FileZilla Client is 3.69.3

Please select the file appropriate for your platform below.

◆ **Windows (64bit x86)** 

Download FileZilla Client



This installer may include bundled offers. Check below for more options.

The 64bit versions of Windows 10 and 11 are supported.

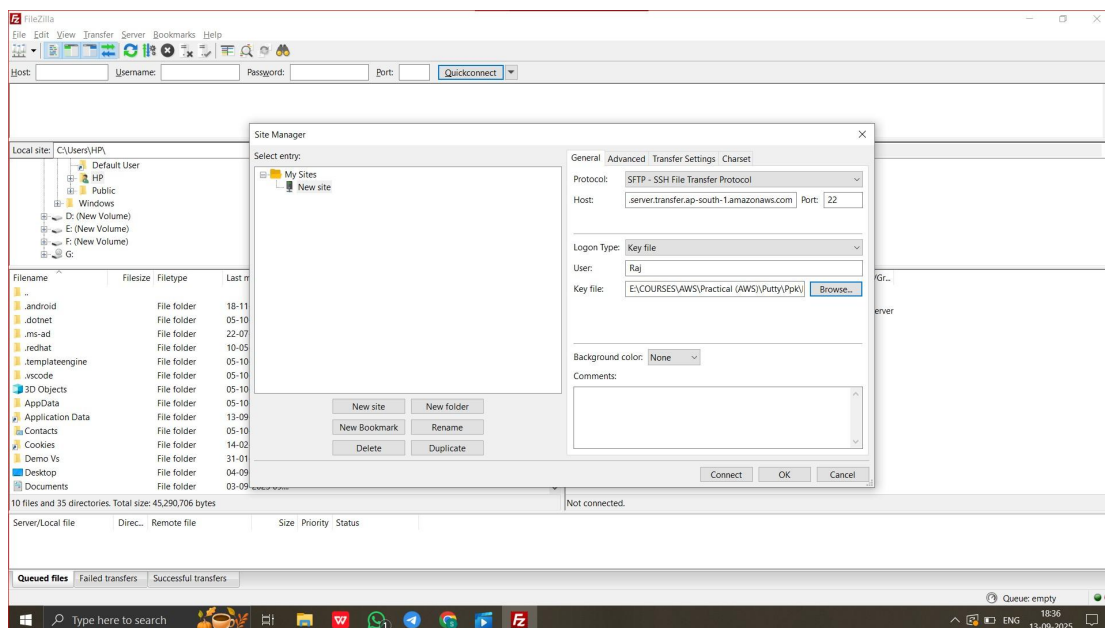
◆ **More download options**

Other platforms:    

Not what you are looking for?

➔ [Show additional download options](#)

Then Connecting it to bucket using ->

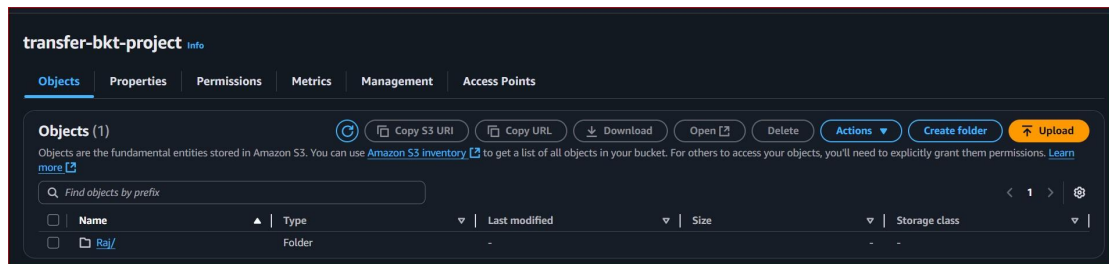


The screenshot shows the FileZilla application window. The Site Manager dialog box is open, displaying the 'General' tab. The 'Select entry' list on the left shows 'My Sites' and 'New site'. The 'General' tab on the right contains the following fields:

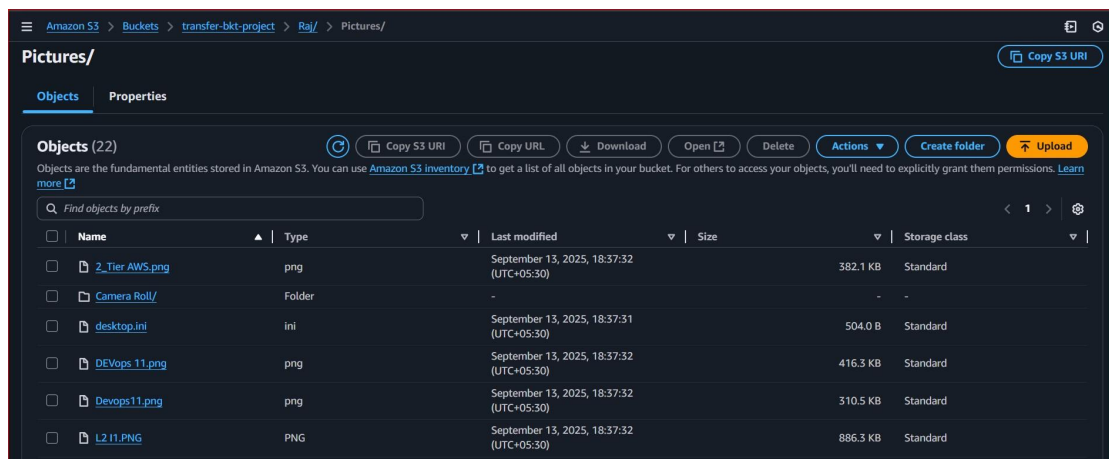
- Protocol: SFTP - SSH File Transfer Protocol
- Host: server.transfer.ap-south-1.amazonaws.com
- Port: 22
- Logon Type: Key file
- User: Raj
- Key file: E:\COURSES\AWS\Practical (AWS)\Putty\Ppk\ (with a 'Browse...' button)
- Background color: None
- Comments: (empty text area)

Buttons at the bottom of the dialog include 'New site', 'New folder', 'New bookmark', 'Rename', 'Delete', 'Duplicate', 'Connect', 'OK', and 'Cancel'. The main FileZilla window shows a local site at C:\Users\HP\ and a list of files and folders. The status bar at the bottom indicates 'Not connected'.

5)After drag and drop files in File Zilla Files are automatically added in bucket using SFTP Protocol .



After expanding object :



And Files are added in bucket.

Stay Connected :



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<https://github.com/codexshwar>

THANK YOU.