Configuring AWS Cloud9

**To set up AWS Cloud9 for S3 upload, follow these steps**:

* Sign in to the AWS Management Console and open the AWS Cloud9 service.
* Click on "Create environment" to create a new Cloud9 environment.
* Provide a name for your environment and optionally add a description.
* Choose an environment type. For S3 upload, you can select either "Create a new instance for environment (EC2)" or "Connect and run in my own (existing) server".
* Select the instance type for your environment. The default selection should suffice for most cases.
* Choose the settings for your environment, such as the VPC, subnet, and other options. Adjust these settings as needed for your specific requirements.
* Review the configuration and click on "Create environment" to create your Cloud9 environment.
* Once the environment is created, it will open in the Cloud9 IDE. On the right side, you will see the file explorer.
* In the file explorer, navigate to the location where you want to upload files to S3. You can create a new folder or select an existing one.
* To upload files to S3, simply drag and drop the files from your local machine into the Cloud9 file explorer. You can also use the "Upload" button in the toolbar to select and upload files.
* To interact with S3 programmatically from your Cloud9 environment, make sure you have the appropriate AWS credentials configured.

**Configure the AWS Cloud9 environment for programmatic access**

* Open your AWS Cloud9 environment.
* Ensure that your Cloud9 environment has the necessary IAM permissions to interact with AWS services. If not, attach the appropriate IAM role to your Cloud9 instance. You can do this by going to the EC2 service in the AWS Management Console, finding your Cloud9 instance, selecting it, and then attaching the necessary IAM role.
* Install the AWS CLI by running the following command in the Cloud9 terminal:

**pip install awscli --upgrade –user**

* This command installs the AWS CLI using pip, the Python package installer. The --user flag ensures that the installation is done in the user's home directory.
* Configure the AWS CLI by running the following command in the terminal:

**aws configure**

* This command prompts you to enter your AWS Access Key ID, Secret Access Key, default region, and default output format. Provide the required information based on your AWS account.
* Verify that the AWS CLI is set up correctly by running a command such as aws s3 ls, which lists the S3 buckets in your account. If the command returns the expected output without any errors, the AWS CLI is successfully set up.
* AWS SDK for Python (Boto3): The AWS CLI installation process already installed Boto3 as a dependency. You can import and use Boto3 in your Python scripts without any additional installation steps.