

AWS CLI and SDK Installation & Configuration (Detailed Steps)

1. Understand What AWS CLI & SDK Are ----- AWS CLI: Command-line tool to manage AWS services. AWS SDK: Library to access AWS using programming languages like Python (boto3).

2. Prerequisites ----- - AWS account - IAM user credentials (Access Key ID & Secret Access Key) - Internet connection - Terminal or command prompt

3. Install AWS CLI ----- For Windows: 1. Download from <https://aws.amazon.com/cli/> 2. Run installer and verify: `aws --version`

For Linux/macOS: `curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip" unzip awscliv2.zip sudo ./aws/install aws --version`

4. Configure AWS CLI (Credentials Setup) ----- Run: `aws configure`

Enter details: AWS Access Key ID: AWS Secret Access Key: Default region name: us-east-1
Default output format: json

Stored at: `~/.aws/credentials` `~/.aws/config`

5. Verify Configuration ----- `aws s3 ls`

6. Install AWS SDK (boto3 for Python) ----- `pip install boto3` `python -m pip show boto3`

7. Configure SDK Credentials ----- boto3 automatically uses `~/.aws/credentials`

8. Test AWS SDK ----- Python code: `import boto3 s3 = boto3.client('s3') for bucket in s3.list_buckets()['Buckets']: print(bucket['Name'])`

9. Advanced Configurations ----- - Multiple profiles: `aws configure --profile dev` `aws s3 ls --profile dev`

- Environment variables: `export AWS_ACCESS_KEY_ID=` `export AWS_SECRET_ACCESS_KEY=` `export AWS_DEFAULT_REGION=us-east-1`

10. Summary ----- | Step | Action | Purpose | |-----|-----|-----| | 1 | Install AWS CLI | Manage AWS from terminal | | 2 | Configure credentials | Connect CLI to AWS account | | 3 | Verify setup | Ensure proper configuration | | 4 | Install SDK | Programmatic AWS access | | 5 | Test Script | Confirm both work correctly |

After setup, you can manage AWS services (EC2, S3, Lambda, etc.) via CLI and Python scripts.