

Policies

- > In IAM, Policies are documents that defines permissions.
- > It is a set of instructions/rules written in JSON format, that AWS reads to allow/deny the actions.
- > It decides, who can do actions; 'what can be performed', 'on which resources the actions can be performed' & 'under what conditions it can be performed'.

e.g. of IAM Policy in JSON format:

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "Statement1",  
      "Effect": "Allow",  
      "Action": "s3:ListBucket",  
      "Resource": "arn:aws:s3:::m3-version"  
    },  
    {  
      "Sid": "Statement2",  
      "Sid": "Statement1",  
      "Effect": "Allow",  
      "Action": "s3:ListAllBucket",  
      "Resource": "arn:aws:s3:::m3-version"  
    }  
  ]  
}
```

- 1. Version:** Version of the policy lang. which is defined by AWS
- 2. Statement block:** It is a block of rules(policies). It is a list of rules inside a policy & in here we can have multiple rules.
- 3. Statement ID(Sid):** Unique identifier for the rule/policy.
- 4. Effect:** Tells AWS whether the rule 'grants permission' OR 'denies permission'
 - Allow: permission is granted.
 - Deny: permission is blocked.
- 5. Action:** Specifies the resources/part of the resource for which permissions are being given.
- 6. Resource:** specifies the resource on which rule have been applied.

Networking Concepts

>> Computer Network:

>> When 2 or more computers (servers or devices) are connected over a network then it is called a 'Computer Network'.



>> A computer network is a set of nodes connected by a communication link.

↓
Devices present in the network.

↓
A medium that connects the devices (e.g: cables, wifi). It can be wired as well as wireless.

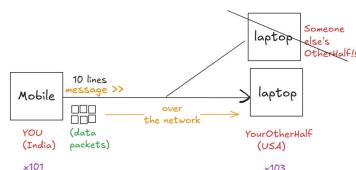
>> Internet:

>> The Internet is a biggest computer network.
>> It interconnects billions computing devices throughout the world, so that they can communicate with each other.



>> Mainly used for communication b/w devices.

>> **Packets:** A packet is a small chunk of data that is sent over a network.



>> Address:

- > An 'address' is an unique identifier that tells the network, where a device/service/data should go, so that communication can happen correctly.
- > Every device present in any network has an address attached to it.
- > In networking, an address tells the computer where to send the data packets.

>> Type of Address:

1. MAC Address (Physical address)
2. Logical Address