**EC2 User Data**

It is used to specify the user data mostly written in shell script to automate the rules at the start up of the system.

An example of the script is given below

**EC2 On Demand**

* Pay for what you use(billing per second,after the first minute)
* Has the highest cost but no upfront payment
* No long term commitment
* Recommended for short term and in-interrupted workloads,where you can’t predict how theapplication will behave.

**EC2 Reserved Instances**

Pay upfront

Up to 95% discount compared to On-demand

Pay upfront for what you use with longterm commitment

Recommended for steady state usage applications (think database)

**Convertible Reserved Instance**

* Can change the Ec2 instance type
* Up to 54% discount

**Scheduled Reserved Instances**

* Launch within the time you reserve

**EC2 Spot Instance**

* Can get a discount of up to 90 compared to On-demand
* You bid a price and get the instance as long as its under the price.
* Price varies based on offer and demand.
* Spot instances are reclaimed within a 2 minute notification warning and the spot price goes above your bid
* Used for batch jobs,Big Data analysis or workloads that are resilent to failures.
* Not great for critical jobs or databases.

**EC2 Dedicated Hosts**

* Physical dedicated Ec2 server for your use.
* Full control of EC2 Instance placement.
* Visibility into the underlying sockets/physical cores of the hardware.
* Allocated for your account for a 3 year period reservation.
* More expensive.
* Useful for software that have complicated licensing model (Bring your own License Model).
* Or for companies with strong regulatory or compliance issues

**EC2 Dedicated Instances**

* Instances are rinning on hardware that’s dedicated to you.
* May share hardware with other instances in same account.
* No conteol over instance placement(can move hardware after Stop/start)

What is an AMI

Amazon Machine Image

* When you built an AMI its not globally available its available for a specific region.

EC2 Instances Overview

Instances have 5 distinct characteristics advertised on the website

* RAM
* CPU
* I/0
* Network
* Graphical Processing Unit

M instances types are balanced

T2/T3 instances are burstable instances

**Burstable Instances:**

* it means that the instance had OK cpu performance.
* When the machine needs to preocess something unexpected it can burst and cpu can be very good.
* If the machine bursts ,it utilizes “burst credits”.
* If all the credits are gone,the CPU becomes BAD

T2 Unlimited it has unlimited the burst credits.