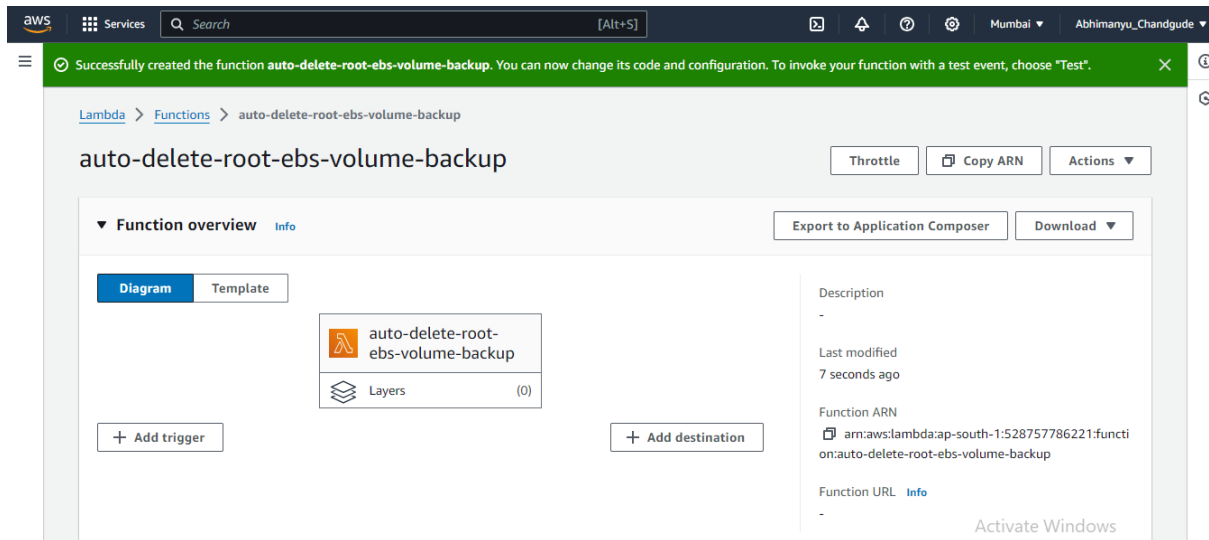


## 30<sup>th</sup> August 2024 - Lambda and Bootstrapping

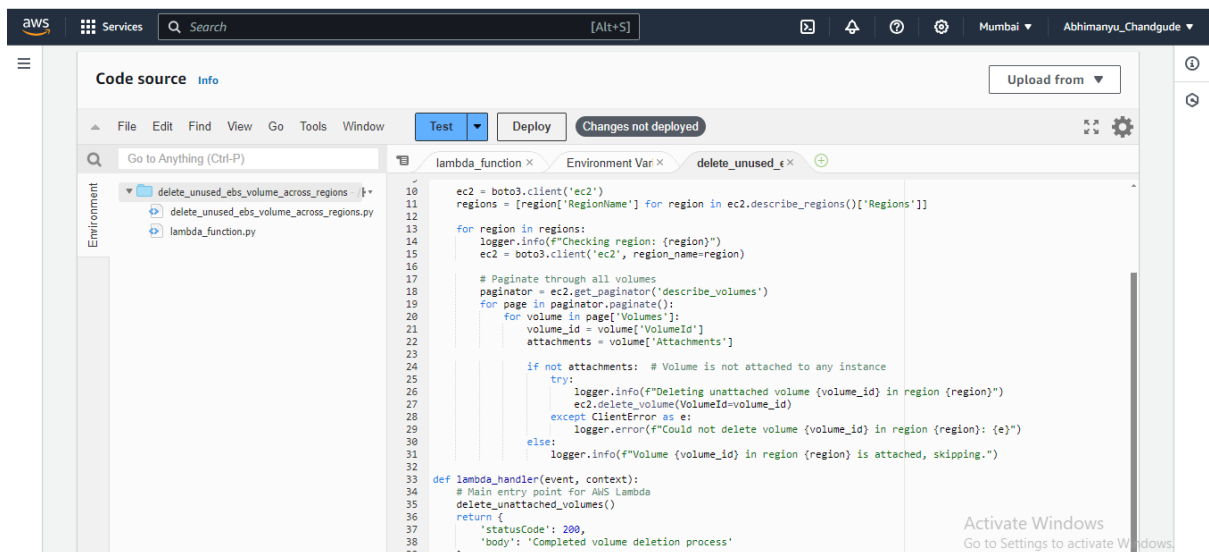
### ➤ Lambda

#### A. Delete unused EBS Volume Across Regions

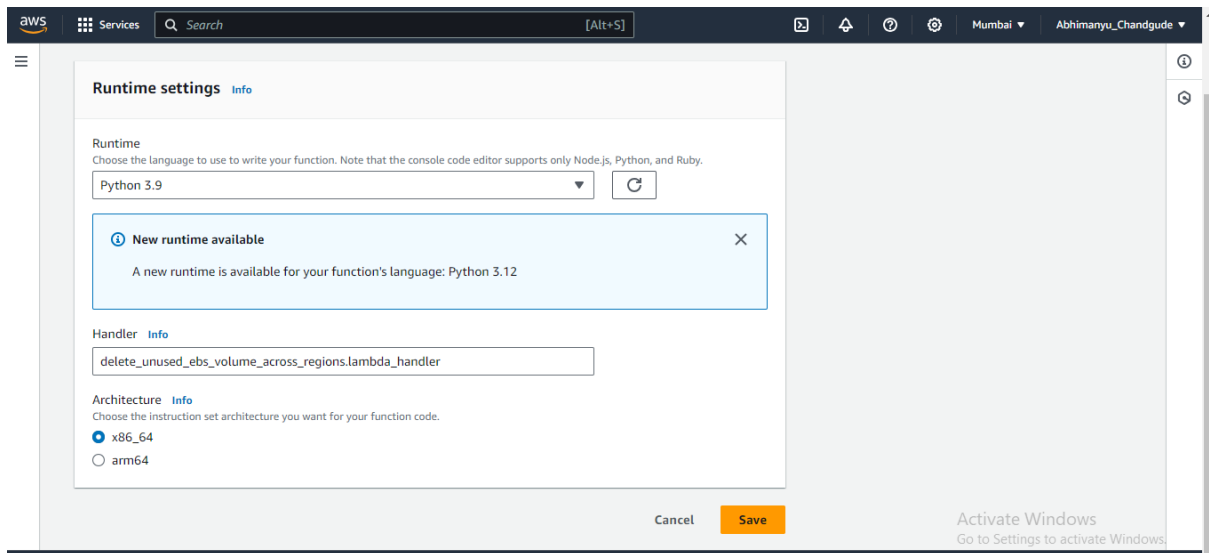
1. Create Lambda Function to delete the unused EBS volume across regions (auto-delete-root-ebs-volume-backup)



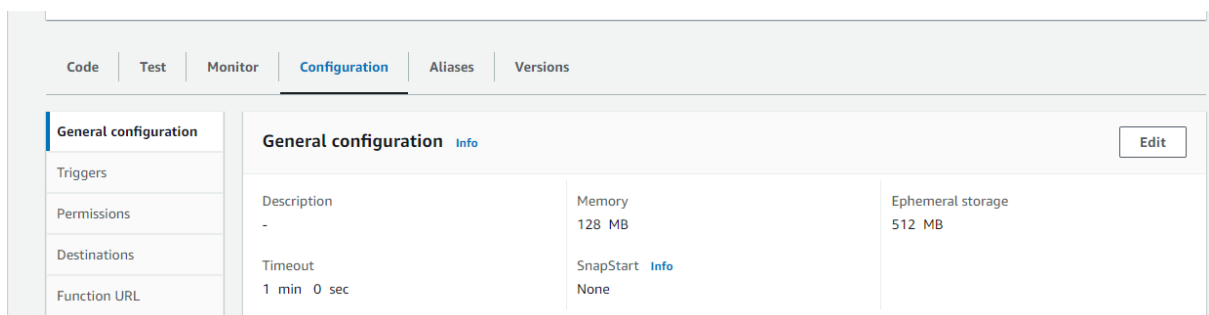
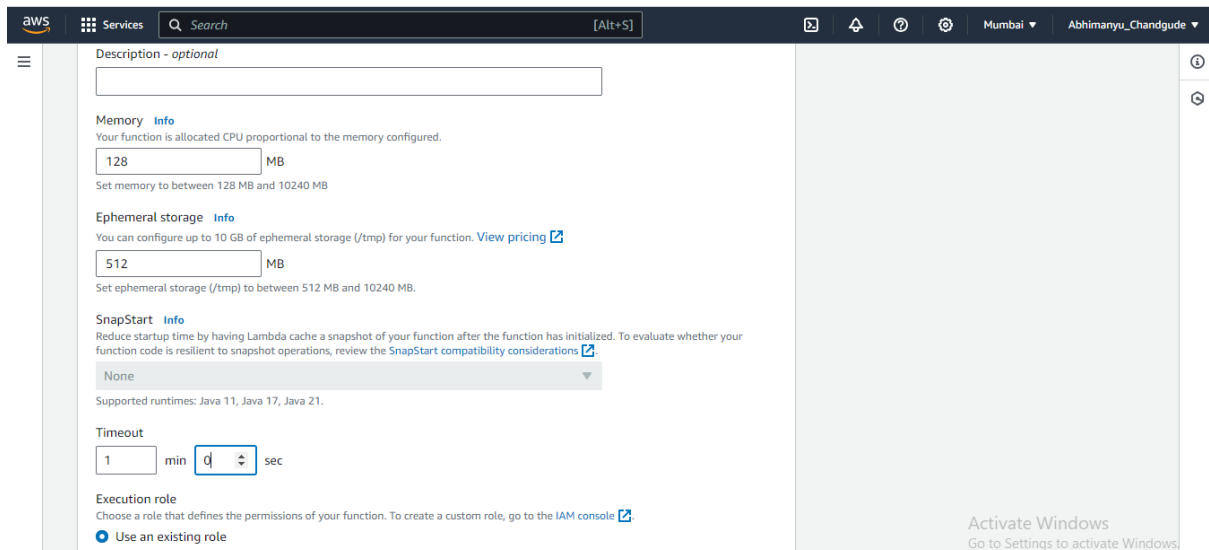
2. Create delete\_unused\_ebs\_volume\_across\_regions.py file



3. Update the Handler



#### 4. Change the timeout value for 3 seconds to 1 minute in Configuration settings



#### 5. Create volume of 10 GB

Successfully created volume vol-0490fde29bb32dd34.

**Volumes (1)** Info

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Create
-	vol-0490fde29bb32dd34	gp3	10 GiB	3000	125	-	2024/

**Fault tolerance for all volumes in this Region**

**Snapshot summary** Last updated on Fri, Aug 30, 2024, 01:45:26 PM (GMT+05:30)

Recently backed up volumes / Total # volumes  
0 / 2

Data Lifecycle Manager default policy for EBS Snapshots status  
No default policy set up | [Create policy](#)

## 6. Create an EC2 instance and check the number of volumes (2 or more)

Request to manage tags has succeeded.

**Instances (3)** Info Last updated less than a minute ago

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
bootstrapping demo	i-0b4f648bd3d55bd45	Running	t2.micro	2/2 checks passed	View alarms +
Prodserver	i-02254f763db365da4	Running	t2.micro	2/2 checks passed	View alarms +
Prodserver	i-08ef0079a7c807592	Running	t2.micro	2/2 checks passed	View alarms +

**Select an instance**

Activate Windows  
Go to Settings to activate Windows.

**Volumes (3)** Info

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Create
-	vol-08bfcdcf90e75288	gp2	8 GiB	100	-	snap-0b5f827...	2024/
-	vol-0c449e0a864196e92	gp2	8 GiB	100	-	snap-0b5f827...	2024/
-	vol-01211a233e7bf93d9	gp2	8 GiB	100	-	snap-0b5f827...	2024/

**Fault tolerance for all volumes in this Region**

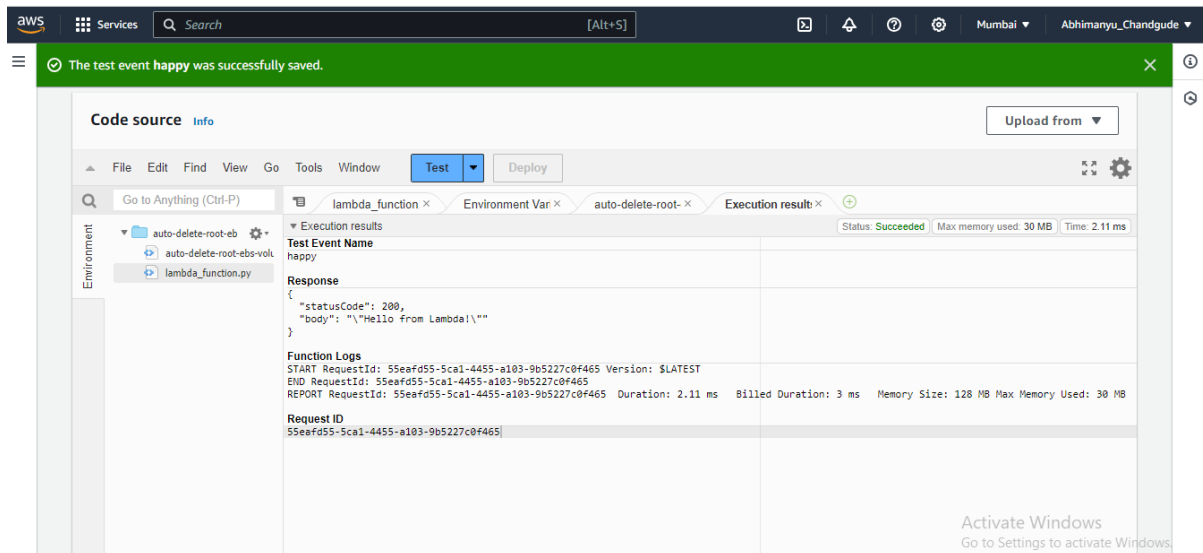
**Snapshot summary** Last updated on Fri, Aug 30, 2024, 05:40:35 PM (GMT+05:30)

Recently backed up volumes / Total # volumes  
0 / 3

Data Lifecycle Manager default policy for EBS Snapshots status  
No default policy set up | [Create policy](#)

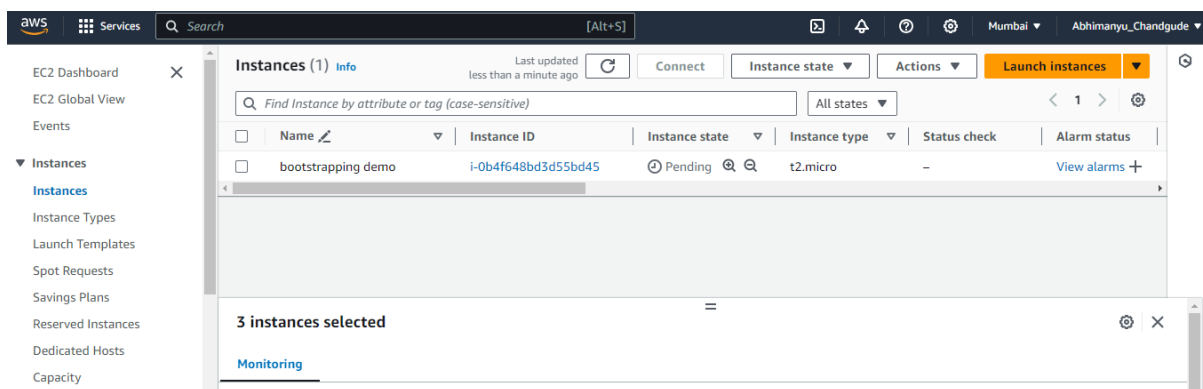
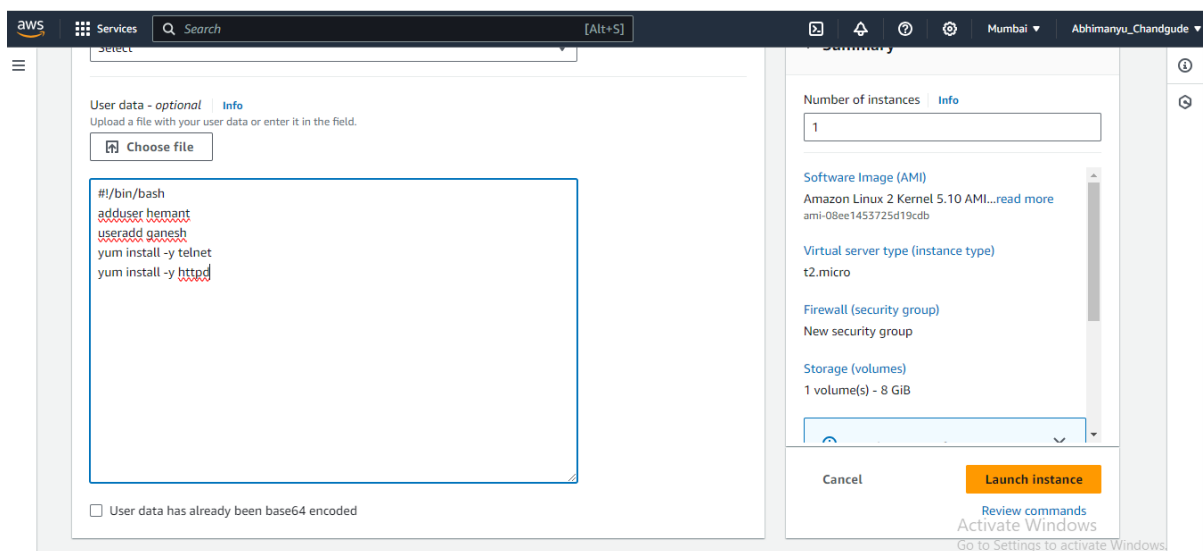
Activate Windows

## 7. Run the Lambda function manually



## ➤ Bootstrapping

1. Create a EC2 instance with stuffing and installing telnet and httpd



2. Check the memory, process running, etc.

```
[ec2-user@ip-172-31-11-120 ~]$ sudo su -
[root@ip-172-31-11-120 ~]# free -m
Mem:      952      75      268      0      608      742
Swap:      0       0       0
[root@ip-172-31-11-120 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        467M  0    467M   0% /dev
tmpfs           477M  0    477M   0% /dev/shm
tmpfs           477M  404K  476M   1% /run
tmpfs           477M  0    477M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  23% /
tmpfs           96M   0    96M   0% /run/user/1000
[root@ip-172-31-11-120 ~]# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda       202:0    0     8G  0 disk
└─xvda1    202:1    0     8G  0 part /
[root@ip-172-31-11-120 ~]# top
top - 10:59:32 up 4 min, 1 user, load average: 0.01, 0.06, 0.02
Tasks: 100 total, 1 running, 52 sleeping, 0 stopped, 0 zombie
%Cpu(s):  0.3 us,  0.0 sy,  0.0 ni, 99.7 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem : 975536 total, 274644 free, 77080 used, 623812 buff/cache
KiB Swap:  0 total,  0 free,  0 used. 759752 avail Mem
```

```
top - 10:59:50 up 4 min, 1 user, load average: 0.01, 0.05, 0.02
Tasks: 100 total, 1 running, 52 sleeping, 0 stopped, 0 zombie
%Cpu(s):  0.3 us,  0.0 sy,  0.0 ni, 99.7 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem : 975536 total, 274644 free, 77080 used, 623812 buff/cache
KiB Swap:  0 total,  0 free,  0 used. 759756 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
1723	root	20	0	0	0	0	S	0.3	0.0	0:00.06	xfsaild/xvda1
1	root	20	0	123680	5588	3928	S	0.0	0.6	0:02.04	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	20	0	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0-cgr
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-ev
7	root	20	0	0	0	0	I	0.0	0.0	0:00.00	kworker/u30:0-e
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
9	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks_rude_
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_tasks_trace
11	root	20	0	0	0	0	S	0.0	0.0	0:00.03	ksoftirqd/0
12	root	20	0	0	0	0	I	0.0	0.0	0:00.13	rcu_sched
13	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
14	root	20	0	0	0	0	I	0.0	0.0	0:00.02	kworker/0:1-mm_
15	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
17	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
18	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
19	root	20	0	0	0	0	I	0.0	0.0	0:00.01	kworker/u30:1-e
21	root	20	0	0	0	0	S	0.0	0.0	0:00.01	kauditd
299	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
300	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_reaper
301	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	writeback
303	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kcompactd0
304	root	25	5	0	0	0	S	0.0	0.0	0:00.00	ksmd
305	root	39	19	0	0	0	S	0.0	0.0	0:00.00	khugepaged
361	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kintegrityd
363	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kblockd
364	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	blkcg_punt_bio
716	root	20	0	0	0	0	S	0.0	0.0	0:00.00	xen-balloon
722	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	tpm_dev_wq
728	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	md

### 3. Check the created users

```
[root@ip-172-31-11-120 ~]#
[root@ip-172-31-11-120 ~]#
[root@ip-172-31-11-120 ~]#
[root@ip-172-31-11-120 ~]# id hemant
uid=1001(hemant) gid=1001(hemant) groups=1001(hemant)
[root@ip-172-31-11-120 ~]# id ganesh
uid=1002(ganesh) gid=1002(ganesh) groups=1002(ganesh)
[root@ip-172-31-11-120 ~]#
```

### 4. Check whether the package of telnet and httpd installed or not?

```
[root@ip-172-31-11-120 ~]# rpm -qa | grep telnet
telnet-0.17-65.amzn2.x86_64
[root@ip-172-31-11-120 ~]# rpm -qa | grep httpd
httpd-tools-2.4.62-1.amzn2.0.2.x86_64
generic-logos-httpd-18.0.0-4.amzn2.noarch
httpd-filesystem-2.4.62-1.amzn2.0.2.noarch
httpd-2.4.62-1.amzn2.0.2.x86_64
[root@ip-172-31-11-120 ~]#
```

5. Check the total number of packages installed on the system

```
[root@ip-172-31-11-120 ~]# rpm -qa | wc -l
465
[root@ip-172-31-11-120 ~]#
```

6. Install git by using CLI and check the total number of packages

```
Total 46 MB/s | 13 MB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : git-core-2.40.1-1.amzn2.0.3.x86_64 1/6
  Installing : git-core-doc-2.40.1-1.amzn2.0.3.noarch 2/6
  Installing : 1:perl-Error-0.17020-2.amzn2.noarch 3/6
  Installing : perl-TermReadKey-2.30-20.amzn2.0.2.x86_64 4/6
  Installing : perl-Git-2.40.1-1.amzn2.0.3.noarch 5/6
  Installing : git-2.40.1-1.amzn2.0.3.x86_64 6/6
  Verifying : perl-TermReadKey-2.30-20.amzn2.0.2.x86_64 1/6
  Verifying : git-2.40.1-1.amzn2.0.3.x86_64 2/6
  Verifying : 1:perl-Error-0.17020-2.amzn2.noarch 3/6
  Verifying : git-core-2.40.1-1.amzn2.0.3.x86_64 4/6
  Verifying : git-core-doc-2.40.1-1.amzn2.0.3.noarch 5/6
  Verifying : perl-Git-2.40.1-1.amzn2.0.3.noarch 6/6

Installed:
  git.x86_64 0:2.40.1-1.amzn2.0.3

Dependency Installed:
  git-core.x86_64 0:2.40.1-1.amzn2.0.3      git-core-doc.noarch 0:2.40.1-1.amzn2.0.3
  perl-Error.noarch 1:0.17020-2.amzn2        perl-Git.noarch 0:2.40.1-1.amzn2.0.3
  perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2

Complete!
[root@ip-172-31-11-120 ~]# rpm -qa | wc -l
471
[root@ip-172-31-11-120 ~]#
```