

# Assignment for Week 2: Amazon EC2 instance creation

## Assignment for Week 2: Amazon EC2 instance creation

1. List the EC2 instance IDs and private IP addresses of all the instances you created.
2. Describe how you find the public IP address of a given instance using the EC2 console. (The public IP address may change whenever an instance is stopped and restarted.)
3. Provide the output of a command showing how much disk space one of your instances has.
4. Provide the output of a command showing how much memory one of your instances has.
5. Provide a listing showing all the processes running in one of your instances.
6. Provide the output of a command showing the network interface configuration of your instance (this should show its private IP address).
7. Provide the output of a command showing the routing table of your instance.
8. Provide the output of a command showing all of the open network connections and ports on one of your instances.
9. Provide a listing of all of the software packages installed on one your instances.
10. Provide transcripts showing the output of the commands you use to update your package database and upgrade packages on each of your instances.

## 1. List the EC2 instance IDs and private IP addresses of all the instances you created.

Name	ID	Private IP
jerry-test-maxi	i-0a6f2249dee8293b9	10.0.6.235

## 2. Describe how you find the public IP address of a given instance using the EC2 console. (The public IP address may change whenever an instance is stopped and restarted.)

```
ubuntu@ip-10-0-6-235:~$ curl ifconfig.me
34.215.67.86
```

## 3. Provide the output of a command showing how much disk space one of your instances has.

```
ubuntu@ip-10-0-6-235:~$ df
```

Filesystem	1K-blocks	Used	Available	Use%	Mounted on
udev	233608	0	233608	0%	/dev
tmpfs	49144	740	48404	2%	/run
/dev/xvda1	8065444	1544552	6504508	20%	/
tmpfs	245712	0	245712	0%	/dev/shm
tmpfs	5120	0	5120	0%	/run/lock
tmpfs	245712	0	245712	0%	/sys/fs/cgroup
/dev/loop0	93184	93184	0	100%	/snap/core/6350
/dev/loop1	18432	18432	0	100%	/snap/amazon-ssm-agent/930
tmpfs	49140	0	49140	0%	/run/user/1000

**4. Provide the output of a command showing how much memory one of your instances has.**

```
ubuntu@ip-10-0-6-235:~$ free -m
```

	total	used	free	shared	buff/cache
Mem:	479371	95	137	0	247
Swap:	0	0	0		

**5. Provide a listing showing all the processes running in one of your instances.**

```
ubuntu@ip-10-0-6-235:~$ ps -aux
```

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.6	1.7	159624	8800	?	Ss	09:10	0:02	/sbin/init
root	2	0.0	0.0	0	0	?	S	09:10	0:00	[kthreadd]
root	4	0.0	0.0	0	0	?	I<	09:10	0:00	
										[kworker/0:0H]
root	5	0.0	0.0	0	0	?	I	09:10	0:00	
										[kworker/u30:0]
root	6	0.0	0.0	0	0	?	I<	09:10	0:00	
										[mm_percpu_wq]
root	7	0.0	0.0	0	0	?	S	09:10	0:00	[ksoftirqd/0]
root	8	0.0	0.0	0	0	?	I	09:10	0:00	[rcu_sched]
root	9	0.0	0.0	0	0	?	I	09:10	0:00	[rcu_bh]
root	10	0.0	0.0	0	0	?	S	09:10	0:00	[migration/0]

root	11	0.0	0.0	0	0 ?	S	09:10	0:00	[watchdog/0]
root	12	0.0	0.0	0	0 ?	S	09:10	0:00	[cpuhp/0]
root	13	0.0	0.0	0	0 ?	S	09:10	0:00	[kdevtmpfs]
root	14	0.0	0.0	0	0 ?	I<	09:10	0:00	[netns]
root	15	0.0	0.0	0	0 ?	S	09:10	0:00	
[rcu_tasks_kthre]									
root	16	0.0	0.0	0	0 ?	S	09:10	0:00	[kauditd]
root	17	0.0	0.0	0	0 ?	S	09:10	0:00	[xenbus]
root	18	0.0	0.0	0	0 ?	S	09:10	0:00	[xenwatch]
root	19	0.0	0.0	0	0 ?	I	09:10	0:00	[kworker/0:1]
root	20	0.0	0.0	0	0 ?	S	09:10	0:00	[khungtaskd]
root	21	0.0	0.0	0	0 ?	S	09:10	0:00	[oom_reaper]
root	22	0.0	0.0	0	0 ?	I<	09:10	0:00	[writeback]
root	23	0.0	0.0	0	0 ?	S	09:10	0:00	[kcompactd0]
root	24	0.0	0.0	0	0 ?	SN	09:10	0:00	[ksmd]
root	25	0.0	0.0	0	0 ?	I<	09:10	0:00	[crypto]
root	26	0.0	0.0	0	0 ?	I<	09:10	0:00	[kintegrityd]
root	27	0.0	0.0	0	0 ?	I<	09:10	0:00	[kblockd]
root	28	0.0	0.0	0	0 ?	I<	09:10	0:00	[ata_sff]
root	29	0.0	0.0	0	0 ?	I<	09:10	0:00	[md]
root	30	0.0	0.0	0	0 ?	I<	09:10	0:00	[edac-poller]
root	31	0.0	0.0	0	0 ?	I<	09:10	0:00	[devfreq_wq]
root	32	0.0	0.0	0	0 ?	I<	09:10	0:00	[watchdogd]
root	33	0.0	0.0	0	0 ?	I	09:10	0:00	
[kworker/u30:1]									
root	35	0.0	0.0	0	0 ?	S	09:10	0:00	[kswapd0]
root	36	0.0	0.0	0	0 ?	I<	09:10	0:00	
[kworker/u31:0]									
root	37	0.0	0.0	0	0 ?	S	09:10	0:00	[ecryptfs-
kthrea]									
root	79	0.0	0.0	0	0 ?	I<	09:10	0:00	[kthrotld]
root	80	0.0	0.0	0	0 ?	I<	09:10	0:00	[nvme-wq]
root	81	0.0	0.0	0	0 ?	S	09:10	0:00	[scsi_eh_0]
root	82	0.0	0.0	0	0 ?	I<	09:10	0:00	[scsi_tmf_0]
root	83	0.0	0.0	0	0 ?	S	09:10	0:00	[scsi_eh_1]
root	84	0.0	0.0	0	0 ?	I<	09:10	0:00	[scsi_tmf_1]
root	85	0.0	0.0	0	0 ?	I	09:10	0:00	
[kworker/u30:2]									
root	89	0.0	0.0	0	0 ?	I<	09:10	0:00	
[ipv6_addrconf]									
root	90	0.0	0.0	0	0 ?	I	09:10	0:00	
[kworker/u30:3]									

```

root      99  0.0  0.0      0      0 ?      I<  09:10  0:00 [kstrp]
root     165  0.0  0.0      0      0 ?      I<  09:10  0:00
[kworker/0:1H]
root     272  0.0  0.0      0      0 ?      I<  09:10  0:00 [raid5wq]
root     324  0.0  0.0      0      0 ?      S   09:10  0:00 [jbd2/xvda1-
8]
root     325  0.0  0.0      0      0 ?      I<  09:10  0:00 [ext4-rsv-
conver]
root     390  0.0  2.5  94784 12324 ?      S<S  09:10  0:00
/lib/systemd/systemd-journald
root     400  0.0  0.0      0      0 ?      I<  09:10  0:00 [iscsi_eh]
root     401  0.0  0.0      0      0 ?      I<  09:10  0:00 [ib-comp-wq]
root     402  0.0  0.0      0      0 ?      I<  09:10  0:00 [ib_mcast]
root     403  0.0  0.0      0      0 ?      I<  09:10  0:00 [ib_nl_sa_wq]
root     404  0.0  0.0      0      0 ?      I<  09:10  0:00 [rdma_cm]
root     416  0.0  0.3  97708 1720 ?      Ss   09:10  0:00 /sbin/lvmetad
-f
root     430  0.0  1.0  43924 4972 ?      Ss   09:10  0:00
/lib/systemd/systemd-udev
root     529  0.0  0.0      0      0 ?      S<  09:10  0:00 [loop0]
root     530  0.0  0.0      0      0 ?      S<  09:10  0:00 [loop1]
systemd+ 541  0.0  0.6 141924 3292 ?      Ssl  09:10  0:00
/lib/systemd/systemd-timesyncd
systemd+ 683  0.0  1.0  80040 5316 ?      Ss   09:10  0:00
/lib/systemd/systemd-networkd
systemd+ 705  0.0  1.0  70624 5284 ?      Ss   09:10  0:00
/lib/systemd/systemd-resolved
root     707  0.0  0.0      0      0 ?      I   09:10  0:00 [kworker/0:2]
root     841  0.0  3.5 170872 17344 ?      Ssl  09:10  0:00
/usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
root     847  0.0  2.5 469004 12720 ?      Ssl  09:10  0:00 /snap/amazon-
ssm-agent/930/amazon-ssm-agent
root     849  0.0  1.2  70576 5968 ?      Ss   09:10  0:00
/lib/systemd/systemd-logind
syslog   851  0.0  0.9 267268 4536 ?      Ssl  09:10  0:00
/usr/sbin/rsyslogd -n
message+ 852  0.0  0.8  50100 4320 ?      Ss   09:10  0:00
/usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --
systemd-activation --syslog-only
root     876  0.0  0.3 161076 1544 ?      Ssl  09:10  0:00
/usr/bin/lxcfs /var/lib/lxcfs/

```

```

root      877  0.0  1.3 287992  6868 ?          Ssl  09:10  0:00
/usr/lib/accountsservice/accounts-daemon
root      882  0.0  4.7 623424 23308 ?          Ssl  09:10  0:00
/usr/lib/snapd/snapd
root      883  0.0  0.6  31748  3228 ?          Ss   09:10  0:00
/usr/sbin/cron -f
daemon    885  0.0  0.4  28332  2408 ?          Ss   09:10  0:00 /usr/sbin/atd
-f
root      891  0.0  1.1  72296  5736 ?          Ss   09:10  0:00
/usr/sbin/sshd -D
root      935  0.0  1.3 288876  6484 ?          Ssl  09:10  0:00
/usr/lib/policykit-1/polkitd --no-debug
root      936  0.0  4.1 187712 20308 ?          Ssl  09:10  0:00
/usr/bin/python3 /usr/share/unattended-upgrades/unattended-upgrade-shutdown --
wait-for-signal
root      941  0.0  0.4  16412  2308 ttyS0     Ss+  09:10  0:00 /sbin/agetty
-o -p -- \u --keep-baud 115200,38400,9600 ttyS0 vt220
root      992  0.0  0.4  14888  2060 tty1      Ss+  09:10  0:00 /sbin/agetty
-o -p -- \u --noclear tty1 linux
root     1147  0.0  1.4 107984  7260 ?          Ss   09:10  0:00 sshd: ubuntu
[priv]
ubuntu    1157  0.0  1.4  76516  7304 ?          Ss   09:10  0:00
/lib/systemd/systemd --user
ubuntu    1168  0.0  0.4 111680  2332 ?          S    09:10  0:00 (sd-pam)
ubuntu    1270  0.0  0.7 107984  3532 ?          S    09:10  0:00 sshd:
ubuntu@pts/0
ubuntu    1271  0.0  1.1  23164  5692 pts/0     Ss   09:10  0:00 -bash
ubuntu    1337  0.0  0.5  22504  2876 pts/0     S+   09:12  0:00 script
ubuntu    1338  0.0  1.0  23024  5244 pts/1     Ss   09:12  0:00 bash -i
ubuntu    1404  0.0  0.7  39896  3736 pts/1     R+   09:15  0:00 ps -aux

```

**6. Provide the output of a command showing the network interface configuration of your instance (this should show its private IP address).**

```

ubuntu@ip-10-0-6-235:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 9001
    inet 10.0.6.235 netmask 255.255.255.0 broadcast 10.0.6.255
    inet6 fe80::853:37ff:fea3:3a7a prefixlen 64 scopeid 0x20<link>
    ether 0a:53:37:a3:3a:7a txqueuelen 1000 (Ethernet)

```

```
RX packets 564  bytes 62842 (62.8 KB)
RX errors 0  dropped 0  overruns 0  frame 0
TX packets 614  bytes 75801 (75.8 KB)
TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

```
lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 124  bytes 9700 (9.7 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 124  bytes 9700 (9.7 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

## 7. Provide the output of a command showing the routing table of your instance.

```
ubuntu@ip-10-0-6-235:~$ ip route
default via 10.0.6.1 dev eth0 proto dhcp src 10.0.6.235 metric 100
10.0.6.0/24 dev eth0 proto kernel scope link src 10.0.6.235
10.0.6.1 dev eth0 proto dhcp scope link src 10.0.6.235 metric 100
```

## 8. Provide the output of a command showing all of the open network connections and ports on one of your instances.

```
ubuntu@ip-10-0-6-235:~$ netstat -antp
(Not all processes could be identified, non-owned process info
 will not be shown, you would have to be root to see it all.)
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
PID/Program name
tcp        0      0 127.0.0.53:53           0.0.0.0:*               LISTEN
-
tcp        0      0 0.0.0.0:22              0.0.0.0:*               LISTEN
-
tcp        0      612 10.0.6.235:22           73.240.52.9:59269      ESTABLISHED
-
tcp6       0      0 :::22                   :::*                    LISTEN
-
```

## 9. Provide a listing of all of the software packages installed on one your instances.

```
ubuntu@ip-10-0-6-235:~$ sudo apt list --installed
Listing... Done
accountsservice/bionic,now 0.6.45-1ubuntu1 amd64 [installed]
acl/bionic,now 2.2.52-3build1 amd64 [installed]
acpid/bionic,now 1:2.0.28-1ubuntu1 amd64 [installed]
adduser/bionic,now 3.116ubuntu1 all [installed]
apparmor/bionic-updates,bionic-security,now 2.12-4ubuntu5.1 amd64 [installed]
appport/bionic-updates,now 2.20.9-0ubuntu7.6 all [installed]
appport-symptoms/bionic,now 0.20 all [installed]
apt/bionic-updates,now 1.6.11 amd64 [installed]
apt-utils/bionic-updates,now 1.6.11 amd64 [installed]
at/bionic,now 3.1.20-3.1ubuntu2 amd64 [installed]
base-files/bionic-updates,now 10.1ubuntu2.4 amd64 [installed]
base-passwd/bionic,now 3.5.44 amd64 [installed]
bash/bionic-updates,now 4.4.18-2ubuntu1.1 amd64 [installed]
bash-completion/bionic,now 1:2.8-1ubuntu1 all [installed]
bc/bionic,now 1.07.1-2 amd64 [installed]
bcache-tools/bionic,now 1.0.8-2build1 amd64 [installed]
bind9-host/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64
[installed]
bsdmainutils/bionic,now 11.1.2ubuntu1 amd64 [installed]
bsdutils/bionic-updates,now 1:2.31.1-0.4ubuntu3.3 amd64 [installed]
btrfs-progs/bionic,now 4.15.1-1build1 amd64 [installed]
btrfs-tools/bionic,now 4.15.1-1build1 amd64 [installed]
busybox-initramfs/bionic-updates,bionic-security,now 1:1.27.2-2ubuntu3.2 amd64
[installed]
busybox-static/bionic-updates,bionic-security,now 1:1.27.2-2ubuntu3.2 amd64
[installed]
byobu/bionic,now 5.125-0ubuntu1 all [installed]
bzip2/bionic-updates,bionic-security,now 1.0.6-8.1ubuntu0.1 amd64 [installed]
ca-certificates/bionic,bionic-updates,now 20180409 all [installed]
cloud-guest-utils/bionic,now 0.30-0ubuntu5 all [installed]
cloud-init/bionic-updates,now 19.1-1-gbaa47854-0ubuntu1~18.04.1 all
[installed]
cloud-initramfs-copymods/bionic-updates,now 0.40ubuntu1.1 all [installed]
cloud-initramfs-dyn-netconf/bionic-updates,now 0.40ubuntu1.1 all [installed]
command-not-found/bionic-updates,now 18.04.5 all [installed]
command-not-found-data/bionic-updates,now 18.04.5 amd64 [installed]
```

console-setup/bionic-updates,now 1.178ubuntu2.9 all [installed]  
console-setup-linux/bionic-updates,now 1.178ubuntu2.9 all [installed]  
coreutils/bionic,now 8.28-1ubuntu1 amd64 [installed]  
cpio/bionic,now 2.12+dfsg-6 amd64 [installed]  
cron/bionic,now 3.0pl1-128.1ubuntu1 amd64 [installed]  
cryptsetup/bionic-updates,now 2:2.0.2-1ubuntu1.1 amd64 [installed]  
cryptsetup-bin/bionic-updates,now 2:2.0.2-1ubuntu1.1 amd64 [installed]  
curl/bionic-updates,bionic-security,now 7.58.0-2ubuntu3.7 amd64 [installed]  
dash/bionic,now 0.5.8-2.10 amd64 [installed]  
dbus/bionic-updates,bionic-security,now 1.12.2-1ubuntu1.1 amd64 [installed]  
debconf/bionic-updates,now 1.5.66ubuntu1 all [installed]  
debconf-i18n/bionic-updates,now 1.5.66ubuntu1 all [installed]  
debianutils/bionic,now 4.8.4 amd64 [installed]  
diffutils/bionic,now 1:3.6-1 amd64 [installed]  
dirmngr/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
distro-info-data/bionic-updates,bionic-security,now 0.37ubuntu0.5 all [installed]  
dmeventd/bionic,now 2:1.02.145-4.1ubuntu3 amd64 [installed]  
dmidecode/bionic,now 3.1-1 amd64 [installed]  
dmsetup/bionic,now 2:1.02.145-4.1ubuntu3 amd64 [installed]  
dns-root-data/bionic,now 2018013001 all [installed]  
dnsmasq-base/bionic,now 2.79-1 amd64 [installed]  
dnsutils/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
dosfstools/bionic,now 4.1-1 amd64 [installed]  
dpkg/bionic-updates,now 1.19.0.5ubuntu2.1 amd64 [installed]  
e2fsprogs/bionic-updates,now 1.44.1-1ubuntu1.1 amd64 [installed]  
eatmydata/bionic,now 105-6 all [installed]  
ebtables/bionic-updates,now 2.0.10.4-3.5ubuntu2.18.04.3 amd64 [installed]  
ed/bionic,now 1.10-2.1 amd64 [installed]  
eject/bionic,now 2.1.5+deb1+cvs20081104-13.2 amd64 [installed]  
ethtool/bionic,now 1:4.15-0ubuntu1 amd64 [installed]  
fdisk/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
file/bionic-updates,bionic-security,now 1:5.32-2ubuntu0.2 amd64 [installed]  
findutils/bionic,now 4.6.0+git+20170828-2 amd64 [installed]  
fonts-ubuntu-console/bionic,now 0.83-2 all [installed]  
friendly-recovery/bionic-updates,now 0.2.38ubuntu1 all [installed]  
ftp/bionic,now 0.17-34 amd64 [installed]  
fuse/bionic,now 2.9.7-1ubuntu1 amd64 [installed]  
gawk/bionic,now 1:4.1.4+dfsg-1build1 amd64 [installed]  
gcc-8-base/bionic-updates,bionic-security,now 8.3.0-6ubuntu1~18.04.1 amd64 [installed]



gdisk/bionic,now 1.0.3-1 amd64 [installed]  
geoip-database/bionic,now 20180315-1 all [installed]  
gettext-base/bionic-updates,bionic-security,now 0.19.8.1-6ubuntu0.3 amd64 [installed]  
gir1.2-glib-2.0/bionic,now 1.56.1-1 amd64 [installed]  
git/bionic-updates,bionic-security,now 1:2.17.1-1ubuntu0.4 amd64 [installed]  
git-man/bionic-updates,bionic-security,now 1:2.17.1-1ubuntu0.4 all [installed]  
gnupg/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gnupg-l10n/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 all [installed]  
gnupg-utils/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpg/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpg-agent/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpg-wks-client/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpg-wks-server/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpgconf/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpgsm/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
gpgv/bionic-updates,bionic-security,now 2.2.4-1ubuntu1.2 amd64 [installed]  
grep/bionic,now 3.1-2 amd64 [installed]  
groff-base/bionic,now 1.22.3-10 amd64 [installed]  
grub-common/bionic-updates,now 2.02-2ubuntu8.13 amd64 [installed,automatic]  
grub-gfxpayload-lists/bionic,now 0.7 amd64 [installed,automatic]  
grub-legacy-ec2/bionic,now 1:1 all [installed]  
grub-pc/bionic-updates,now 2.02-2ubuntu8.13 amd64 [installed,automatic]  
grub-pc-bin/bionic-updates,now 2.02-2ubuntu8.13 amd64 [installed,automatic]  
grub2-common/bionic-updates,now 2.02-2ubuntu8.13 amd64 [installed,automatic]  
gzip/bionic,now 1.6-5ubuntu1 amd64 [installed]  
hdparm/bionic,now 9.54+ds-1 amd64 [installed]  
hibagent/bionic,now 1.0.1-0ubuntu1 all [installed]  
hostname/bionic,now 3.20 amd64 [installed]  
htop/bionic,now 2.1.0-3 amd64 [installed]  
info/bionic,now 6.5.0.dfsg.1-2 amd64 [installed]  
init/bionic,now 1.51 amd64 [installed]  
init-system-helpers/bionic,now 1.51 all [installed]  
initramfs-tools/bionic-updates,now 0.130ubuntu3.8 all [installed]  
initramfs-tools-bin/bionic-updates,now 0.130ubuntu3.8 amd64 [installed]  
initramfs-tools-core/bionic-updates,now 0.130ubuntu3.8 all [installed]  
install-info/bionic,now 6.5.0.dfsg.1-2 amd64 [installed]  
iproute2/bionic,now 4.15.0-2ubuntu1 amd64 [installed]

iptables/bionic,now 1.6.1-2ubuntu2 amd64 [installed]  
iputils-ping/bionic,now 3:20161105-1ubuntu2 amd64 [installed]  
iputils-tracepath/bionic,now 3:20161105-1ubuntu2 amd64 [installed]  
irqbalance/bionic-updates,now 1.3.0-0.1ubuntu0.18.04.1 amd64 [installed]  
isc-dhcp-client/bionic-updates,bionic-security,now 4.3.5-3ubuntu7.1 amd64 [installed]  
isc-dhcp-common/bionic-updates,bionic-security,now 4.3.5-3ubuntu7.1 amd64 [installed]  
iso-codes/bionic,now 3.79-1 all [installed]  
kbd/bionic,now 2.0.4-2ubuntu1 amd64 [installed]  
keyboard-configuration/bionic-updates,now 1.178ubuntu2.9 all [installed]  
klibc-utils/bionic,now 2.0.4-9ubuntu2 amd64 [installed]  
kmod/bionic-updates,now 24-1ubuntu3.2 amd64 [installed]  
krb5-locales/bionic-updates,bionic-security,now 1.16-2ubuntu0.1 all [installed]  
landscape-common/bionic-updates,now 18.01-0ubuntu3.3 amd64 [installed]  
language-selector-common/bionic-updates,now 0.188.2 all [installed]  
less/bionic,now 487-0.1 amd64 [installed]  
libaccountsservice0/bionic,now 0.6.45-1ubuntu1 amd64 [installed]  
libacl1/bionic,now 2.2.52-3build1 amd64 [installed]  
libapparmor1/bionic-updates,bionic-security,now 2.12-4ubuntu5.1 amd64 [installed]  
libapt-inst2.0/bionic-updates,now 1.6.11 amd64 [installed]  
libapt-pkg5.0/bionic-updates,now 1.6.11 amd64 [installed]  
libargon2-0/bionic,now 0~20161029-1.1 amd64 [installed]  
libasn1-8-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libassuan0/bionic,now 2.5.1-2 amd64 [installed]  
libatm1/bionic,now 1:2.5.1-2build1 amd64 [installed]  
libattr1/bionic,now 1:2.4.47-2build1 amd64 [installed]  
libaudit-common/bionic,now 1:2.8.2-1ubuntu1 all [installed]  
libaudit1/bionic,now 1:2.8.2-1ubuntu1 amd64 [installed]  
libbind9-160/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libblkid1/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
libbsd0/bionic,now 0.8.7-1 amd64 [installed]  
libbz2-1.0/bionic-updates,bionic-security,now 1.0.6-8.1ubuntu0.1 amd64 [installed]  
libc-bin/bionic,now 2.27-3ubuntu1 amd64 [installed]  
libc6/bionic,now 2.27-3ubuntu1 amd64 [installed]  
libcap-ng0/bionic,now 0.7.7-3.1 amd64 [installed]  
libcap2/bionic,now 1:2.25-1.2 amd64 [installed]  
libcap2-bin/bionic,now 1:2.25-1.2 amd64 [installed]

libcom-err2/bionic-updates,now 1.44.1-1ubuntu1.1 amd64 [installed]  
libcryptsetup12/bionic-updates,now 2:2.0.2-1ubuntu1.1 amd64 [installed]  
libcurl3-gnutls/bionic-updates,bionic-security,now 7.58.0-2ubuntu3.7 amd64 [installed]  
libcurl4/bionic-updates,bionic-security,now 7.58.0-2ubuntu3.7 amd64 [installed]  
libdb5.3/bionic-updates,bionic-security,now 5.3.28-13.1ubuntu1.1 amd64 [installed]  
libdbus-1-3/bionic-updates,bionic-security,now 1.12.2-1ubuntu1.1 amd64 [installed]  
libdebconfclient0/bionic,now 0.213ubuntu1 amd64 [installed]  
libdevmapper-event1.02.1/bionic,now 2:1.02.145-4.1ubuntu3 amd64 [installed]  
libdevmapper1.02.1/bionic,now 2:1.02.145-4.1ubuntu3 amd64 [installed]  
libdns-export1100/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libdns1100/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libdrm-common/bionic-updates,now 2.4.95-1~18.04.1 all [installed]  
libdrm2/bionic-updates,now 2.4.95-1~18.04.1 amd64 [installed]  
libdumbnet1/bionic,now 1.12-7build1 amd64 [installed]  
libeatmydata1/bionic,now 105-6 amd64 [installed]  
libedit2/bionic,now 3.1-20170329-1 amd64 [installed]  
libelf1/bionic-updates,bionic-security,now 0.170-0.4ubuntu0.1 amd64 [installed]  
liberror-perl/bionic,now 0.17025-1 all [installed]  
libestr0/bionic,now 0.1.10-2.1 amd64 [installed]  
libevent-2.1-6/bionic,now 2.1.8-stable-4build1 amd64 [installed]  
libexpat1/bionic-updates,bionic-security,now 2.2.5-3ubuntu0.1 amd64 [installed]  
libext2fs2/bionic-updates,now 1.44.1-1ubuntu1.1 amd64 [installed]  
libfastjson4/bionic,now 0.99.8-2 amd64 [installed]  
libfdisk1/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
libffi6/bionic,now 3.2.1-8 amd64 [installed]  
libfreetype6/bionic,now 2.8.1-2ubuntu2 amd64 [installed,automatic]  
libfribidi0/bionic,now 0.19.7-2 amd64 [installed]  
libfuse2/bionic,now 2.9.7-1ubuntu1 amd64 [installed]  
libgcc1/bionic-updates,bionic-security,now 1:8.3.0-6ubuntu1~18.04.1 amd64 [installed]  
libgcrypt20/bionic-updates,bionic-security,now 1.8.1-4ubuntu1.1 amd64 [installed]  
libgdbm-compat4/bionic,now 1.14.1-6 amd64 [installed]  
libgdbm5/bionic,now 1.14.1-6 amd64 [installed]

libgeoip1/bionic,now 1.6.12-1 amd64 [installed]  
libgirepository-1.0-1/bionic,now 1.56.1-1 amd64 [installed]  
libglb2.0-0/bionic-updates,bionic-security,now 2.56.4-0ubuntu0.18.04.3 amd64 [installed]  
libglb2.0-data/bionic-updates,bionic-security,now 2.56.4-0ubuntu0.18.04.3 all [installed]  
libgmp10/bionic,now 2:6.1.2+dfsg-2 amd64 [installed]  
libgnutls30/bionic-updates,bionic-security,now 3.5.18-1ubuntu1.1 amd64 [installed]  
libgpg-error0/bionic,now 1.27-6 amd64 [installed]  
libgpm2/bionic,now 1.20.7-5 amd64 [installed]  
libgssapi-krb5-2/bionic-updates,bionic-security,now 1.16-2ubuntu0.1 amd64 [installed]  
libgssapi3-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libhcrypto4-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libheimbase1-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libheimntlm0-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libhogweed4/bionic,now 3.4-1 amd64 [installed]  
libhx509-5-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libicu60/bionic,now 60.2-3ubuntu3 amd64 [installed]  
libidn11/bionic-updates,now 1.33-2.1ubuntu1.2 amd64 [installed]  
libidn2-0/bionic,now 2.0.4-1.1build2 amd64 [installed]  
libip4tc0/bionic,now 1.6.1-2ubuntu2 amd64 [installed]  
libip6tc0/bionic,now 1.6.1-2ubuntu2 amd64 [installed]  
libiptc0/bionic,now 1.6.1-2ubuntu2 amd64 [installed]  
libirs160/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libisc-export169/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libisc169/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libisccc160/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libisccfg160/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
libisns0/bionic,now 0.97-2build1 amd64 [installed]  
libjson-c3/bionic,now 0.12.1-1.3 amd64 [installed]  
libk5crypto3/bionic-updates,bionic-security,now 1.16-2ubuntu0.1 amd64 [installed]  
libkeyutils1/bionic,now 1.5.9-9.2ubuntu2 amd64 [installed]  
libklibc/bionic,now 2.0.4-9ubuntu2 amd64 [installed]  
libkmod2/bionic-updates,now 24-1ubuntu3.2 amd64 [installed]

libkrb5-26-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libkrb5-3/bionic-updates,bionic-security,now 1.16-2ubuntu0.1 amd64 [installed]  
libkrb5support0/bionic-updates,bionic-security,now 1.16-2ubuntu0.1 amd64 [installed]  
libksba8/bionic,now 1.3.5-2 amd64 [installed]  
libldap-2.4-2/bionic-updates,now 2.4.45+dfsg-1ubuntu1.2 amd64 [installed]  
libldap-common/bionic-updates,now 2.4.45+dfsg-1ubuntu1.2 all [installed]  
liblocale-gettext-perl/bionic,now 1.07-3build2 amd64 [installed]  
liblvm2app2.2/bionic,now 2.02.176-4.1ubuntu3 amd64 [installed]  
liblvm2cmd2.02/bionic,now 2.02.176-4.1ubuntu3 amd64 [installed]  
liblwres160/bionic-updates,bionic-security,now 1:9.11.3+dfsg-1ubuntu1.8 amd64 [installed]  
liblxc-common/bionic-updates,now 3.0.3-0ubuntu1~18.04.1 amd64 [installed]  
liblxc1/bionic-updates,now 3.0.3-0ubuntu1~18.04.1 amd64 [installed]  
liblz4-1/bionic,now 0.0~r131-2ubuntu3 amd64 [installed]  
liblzma5/bionic,now 5.2.2-1.3 amd64 [installed]  
liblzo2-2/bionic,now 2.08-1.2 amd64 [installed]  
libmagic-mgc/bionic-updates,bionic-security,now 1:5.32-2ubuntu0.2 amd64 [installed]  
libmagic1/bionic-updates,bionic-security,now 1:5.32-2ubuntu0.2 amd64 [installed]  
libmnl0/bionic,now 1.0.4-2 amd64 [installed]  
libmount1/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
libmpdec2/bionic,now 2.4.2-1ubuntu1 amd64 [installed]  
libmpfr6/bionic,now 4.0.1-1 amd64 [installed]  
libmspack0/bionic-updates,bionic-security,now 0.6-3ubuntu0.2 amd64 [installed]  
libncurses5/bionic-updates,now 6.1-1ubuntu1.18.04 amd64 [installed]  
libncursesw5/bionic-updates,now 6.1-1ubuntu1.18.04 amd64 [installed]  
libnetfilter-conntrack3/bionic,now 1.0.6-2 amd64 [installed]  
libnettle6/bionic,now 3.4-1 amd64 [installed]  
libnewt0.52/bionic,now 0.52.20-1ubuntu1 amd64 [installed]  
libnfnetwork0/bionic,now 1.0.1-3 amd64 [installed]  
libnghttp2-14/bionic,now 1.30.0-1ubuntu1 amd64 [installed]  
libnih1/bionic,now 1.0.3-6ubuntu2 amd64 [installed]  
libnpth0/bionic,now 1.5-3 amd64 [installed]  
libnss-systemd/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
libntfs-3g88/bionic-updates,bionic-security,now 1:2017.3.23-2ubuntu0.18.04.2 amd64 [installed]  
libnuma1/bionic-updates,now 2.0.11-2.1ubuntu0.1 amd64 [installed]  
libp11-kit0/bionic,now 0.23.9-2 amd64 [installed]  
libpam-cap/bionic,now 1:2.25-1.2 amd64 [installed]  
libpam-modules/bionic-updates,now 1.1.8-3.6ubuntu2.18.04.1 amd64 [installed]

libpam-modules-bin/bionic-updates,now 1.1.8-3.6ubuntu2.18.04.1 amd64 [installed]  
libpam-runtime/bionic-updates,now 1.1.8-3.6ubuntu2.18.04.1 all [installed]  
libpam-systemd/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
libpam0g/bionic-updates,now 1.1.8-3.6ubuntu2.18.04.1 amd64 [installed]  
libparted2/bionic-updates,now 3.2-20ubuntu0.2 amd64 [installed]  
libpcap0.8/bionic,now 1.8.1-6ubuntu1 amd64 [installed]  
libpci3/bionic-updates,now 1:3.5.2-1ubuntu1.1 amd64 [installed]  
libpcrc3/bionic,now 2:8.39-9 amd64 [installed]  
libperl5.26/bionic-updates,bionic-security,now 5.26.1-6ubuntu0.3 amd64 [installed]  
libpipeline1/bionic,now 1.5.0-1 amd64 [installed]  
libplymouth4/bionic-updates,now 0.9.3-1ubuntu7.18.04.2 amd64 [installed]  
libpng16-16/bionic-updates,bionic-security,now 1.6.34-1ubuntu0.18.04.2 amd64 [installed]  
libpolkit-agent-1-0/bionic-updates,bionic-security,now 0.105-20ubuntu0.18.04.5 amd64 [installed]  
libpolkit-backend-1-0/bionic-updates,bionic-security,now 0.105-20ubuntu0.18.04.5 amd64 [installed]  
libpolkit-gobject-1-0/bionic-updates,bionic-security,now 0.105-20ubuntu0.18.04.5 amd64 [installed]  
libpopt0/bionic,now 1.16-11 amd64 [installed]  
libprocps6/bionic-updates,bionic-security,now 2:3.3.12-3ubuntu1.1 amd64 [installed]  
libpsl5/bionic,now 0.19.1-5build1 amd64 [installed]  
libpython3-stdlib/bionic-updates,now 3.6.7-1~18.04 amd64 [installed]  
libpython3.6/bionic-updates,now 3.6.8-1~18.04.1 amd64 [installed]  
libpython3.6-minimal/bionic-updates,now 3.6.8-1~18.04.1 amd64 [installed]  
libpython3.6-stdlib/bionic-updates,now 3.6.8-1~18.04.1 amd64 [installed]  
libreadline5/bionic,now 5.2+dfsg-3build1 amd64 [installed]  
libreadline7/bionic,now 7.0-3 amd64 [installed]  
libroken18-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
librtmp1/bionic,now 2.4+20151223.gitfa8646d.1-1 amd64 [installed]  
libsasl2-2/bionic,now 2.1.27~101-g0780600+dfsg-3ubuntu2 amd64 [installed]  
libsasl2-modules/bionic,now 2.1.27~101-g0780600+dfsg-3ubuntu2 amd64 [installed]  
libsasl2-modules-db/bionic,now 2.1.27~101-g0780600+dfsg-3ubuntu2 amd64 [installed]  
libseccomp2/bionic-updates,bionic-security,now 2.4.1-0ubuntu0.18.04.2 amd64 [installed]  
libselinux1/bionic,now 2.7-2build2 amd64 [installed]  
libsemanage-common/bionic,now 2.7-2build2 all [installed]

libsemanage1/bionic,now 2.7-2build2 amd64 [installed]  
libsepol1/bionic,now 2.7-1 amd64 [installed]  
libsigsegv2/bionic,now 2.12-1 amd64 [installed]  
libslang2/bionic,now 2.3.1a-3ubuntu1 amd64 [installed]  
libsmartcols1/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
libsqlite3-0/bionic-updates,bionic-security,now 3.22.0-1ubuntu0.1 amd64 [installed]  
libss2/bionic-updates,now 1.44.1-1ubuntu1.1 amd64 [installed]  
libssl1.0.0/bionic-updates,bionic-security,now 1.0.2n-1ubuntu5.3 amd64 [installed]  
libssl1.1/bionic-updates,now 1.1.1-1ubuntu2.1~18.04.3 amd64 [installed]  
libstdc++6/bionic-updates,bionic-security,now 8.3.0-6ubuntu1~18.04.1 amd64 [installed]  
libsystemd0/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
libtasn1-6/bionic,now 4.13-2 amd64 [installed]  
libtext-charwidth-perl/bionic,now 0.04-7.1 amd64 [installed]  
libtext-iconv-perl/bionic,now 1.7-5build6 amd64 [installed]  
libtext-wrapi18n-perl/bionic,now 0.06-7.1 all [installed]  
libtinfo5/bionic-updates,now 6.1-1ubuntu1.18.04 amd64 [installed]  
libudev1/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
libunistring2/bionic-updates,now 0.9.9-0ubuntu2 amd64 [installed]  
libunwind8/bionic,now 1.2.1-8 amd64 [installed]  
libusb-1.0-0/bionic,now 2:1.0.21-2 amd64 [installed]  
libutempter0/bionic,now 1.1.6-3 amd64 [installed]  
libuuid1/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
libuv1/bionic,now 1.18.0-3 amd64 [installed,automatic]  
libwind0-heimdal/bionic,now 7.5.0+dfsg-1 amd64 [installed]  
libwrap0/bionic,now 7.6.q-27 amd64 [installed]  
libx11-6/bionic-updates,now 2:1.6.4-3ubuntu0.2 amd64 [installed]  
libx11-data/bionic-updates,now 2:1.6.4-3ubuntu0.2 all [installed]  
libxau6/bionic,now 1:1.0.8-1 amd64 [installed]  
libxcb1/bionic-updates,now 1.13-2~ubuntu18.04 amd64 [installed]  
libxdmcp6/bionic,now 1:1.1.2-3 amd64 [installed]  
libxext6/bionic,now 2:1.3.3-1 amd64 [installed]  
libxml2/bionic-updates,bionic-security,now 2.9.4+dfsg1-6.1ubuntu1.2 amd64 [installed]  
libxmlsec1/bionic,now 1.2.25-1build1 amd64 [installed]  
libxmlsec1-openssl/bionic,now 1.2.25-1build1 amd64 [installed]  
libxmuu1/bionic,now 2:1.1.2-2 amd64 [installed]  
libxslt1.1/bionic-updates,bionic-security,now 1.1.29-5ubuntu0.1 amd64 [installed]  
libxtables12/bionic,now 1.6.1-2ubuntu2 amd64 [installed]



libyaml-0-2/bionic,now 0.1.7-2ubuntu3 amd64 [installed]  
libzstd1/bionic,now 1.3.3+dfsg-2ubuntu1 amd64 [installed]  
linux-aws/bionic-updates,bionic-security,now 4.15.0-1043.42 amd64 [installed]  
linux-aws-headers-4.15.0-1032/bionic-updates,bionic-security,now 4.15.0-1032.34 all [installed]  
linux-aws-headers-4.15.0-1043/bionic-updates,bionic-security,now 4.15.0-1043.45 all [installed,automatic]  
linux-base/bionic,now 4.5ubuntu1 all [installed]  
linux-headers-4.15.0-1032-aws/bionic-updates,bionic-security,now 4.15.0-1032.34 amd64 [installed]  
linux-headers-4.15.0-1043-aws/bionic-updates,bionic-security,now 4.15.0-1043.45 amd64 [installed,automatic]  
linux-headers-aws/bionic-updates,bionic-security,now 4.15.0-1043.42 amd64 [installed]  
linux-image-4.15.0-1032-aws/bionic-updates,bionic-security,now 4.15.0-1032.34 amd64 [installed]  
linux-image-4.15.0-1043-aws/bionic-updates,bionic-security,now 4.15.0-1043.45 amd64 [installed,automatic]  
linux-image-aws/bionic-updates,bionic-security,now 4.15.0-1043.42 amd64 [installed]  
linux-modules-4.15.0-1032-aws/bionic-updates,bionic-security,now 4.15.0-1032.34 amd64 [installed]  
linux-modules-4.15.0-1043-aws/bionic-updates,bionic-security,now 4.15.0-1043.45 amd64 [installed,automatic]  
locales/bionic,now 2.27-3ubuntu1 all [installed]  
login/bionic-updates,now 1:4.5-1ubuntu2 amd64 [installed]  
logrotate/bionic,now 3.11.0-0.1ubuntu1 amd64 [installed]  
lsb-base/bionic,now 9.20170808ubuntu1 all [installed]  
lsb-release/bionic,now 9.20170808ubuntu1 all [installed]  
lshw/bionic-updates,now 02.18-0.1ubuntu6.18.04.1 amd64 [installed]  
lsuf/bionic,now 4.89+dfsg-0.1 amd64 [installed]  
ltrace/bionic,now 0.7.3-6ubuntu1 amd64 [installed]  
lvm2/bionic,now 2.02.176-4.1ubuntu3 amd64 [installed]  
lxcfs/bionic-updates,now 3.0.3-0ubuntu1~18.04.1 amd64 [installed]  
lxd/bionic-updates,now 3.0.3-0ubuntu1~18.04.1 amd64 [installed]  
lxd-client/bionic-updates,now 3.0.3-0ubuntu1~18.04.1 amd64 [installed]  
man-db/bionic-updates,now 2.8.3-2ubuntu0.1 amd64 [installed]  
manpages/bionic,now 4.15-1 all [installed]  
mawk/bionic,now 1.3.3-17ubuntu3 amd64 [installed]  
mdadm/bionic-updates,now 4.1~rc1-3~ubuntu18.04.2 amd64 [installed]  
mime-support/bionic,now 3.60ubuntu1 all [installed]  
mlocate/bionic,now 0.26-2ubuntu3.1 amd64 [installed]



```
mount/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]
mtr-tiny/bionic,now 0.92-1 amd64 [installed]
multiarch-support/bionic,now 2.27-3ubuntu1 amd64 [installed]
nano/bionic,now 2.9.3-2 amd64 [installed]
ncurses-base/bionic-updates,now 6.1-1ubuntu1.18.04 all [installed]
ncurses-bin/bionic-updates,now 6.1-1ubuntu1.18.04 amd64 [installed]
ncurses-term/bionic-updates,now 6.1-1ubuntu1.18.04 all [installed]
net-tools/bionic,now 1.60+git20161116.90da8a0-1ubuntu1 amd64 [installed]
netbase/bionic,now 5.4 all [installed]
netcat-openbsd/bionic-updates,now 1.187-1ubuntu0.1 amd64 [installed]
netplan.io/bionic-updates,now 0.97-0ubuntu1~18.04.1 amd64 [installed]
networkd-dispatcher/bionic-updates,now 1.7-0ubuntu3.3 all [installed]
nplan/bionic-updates,now 0.97-0ubuntu1~18.04.1 all [installed]
ntfs-3g/bionic-updates,bionic-security,now 1:2017.3.23-2ubuntu0.18.04.2 amd64
[installed]
open-iscsi/bionic-updates,now 2.0.874-5ubuntu2.7 amd64 [installed]
open-vm-tools/bionic-updates,now 2:10.3.10-1~ubuntu0.18.04.1 amd64 [installed]
openssh-client/bionic-updates,bionic-security,now 1:7.6p1-4ubuntu0.3 amd64
[installed]
openssh-server/bionic-updates,bionic-security,now 1:7.6p1-4ubuntu0.3 amd64
[installed]
openssh-sftp-server/bionic-updates,bionic-security,now 1:7.6p1-4ubuntu0.3
amd64 [installed]
openssl/bionic-updates,now 1.1.1-1ubuntu2.1~18.04.3 amd64 [installed]
os-prober/bionic,now 1.74ubuntu1 amd64 [installed,automatic]
overlayroot/bionic-updates,now 0.40ubuntu1.1 all [installed]
parted/bionic-updates,now 3.2-20ubuntu0.2 amd64 [installed]
passwd/bionic-updates,now 1:4.5-1ubuntu2 amd64 [installed]
pastebinit/bionic,now 1.5-2 all [installed]
patch/bionic,now 2.7.6-2ubuntu1 amd64 [installed]
pciutils/bionic-updates,now 1:3.5.2-1ubuntu1.1 amd64 [installed]
perl/bionic-updates,bionic-security,now 5.26.1-6ubuntu0.3 amd64 [installed]
perl-base/bionic-updates,bionic-security,now 5.26.1-6ubuntu0.3 amd64
[installed]
perl-modules-5.26/bionic-updates,bionic-security,now 5.26.1-6ubuntu0.3 all
[installed]
pinentry-curses/bionic,now 1.1.0-1 amd64 [installed]
plymouth/bionic-updates,now 0.9.3-1ubuntu7.18.04.2 amd64 [installed]
plymouth-theme-ubuntu-text/bionic-updates,now 0.9.3-1ubuntu7.18.04.2 amd64
[installed]
policykit-1/bionic-updates,bionic-security,now 0.105-20ubuntu0.18.04.5 amd64
[installed]
```

pollinate/bionic-updates,now 4.33-0ubuntu1~18.04.1 all [installed]  
popularity-contest/bionic,now 1.66ubuntu1 all [installed]  
powermgmt-base/bionic,now 1.33 all [installed]  
procps/bionic-updates,bionic-security,now 2:3.3.12-3ubuntu1.1 amd64 [installed]  
psmisc/bionic-updates,now 23.1-1ubuntu0.1 amd64 [installed]  
publicsuffix/bionic,now 20180223.1310-1 all [installed]  
python-apt-common/bionic-updates,now 1.6.4 all [installed]  
python3/bionic-updates,now 3.6.7-1~18.04 amd64 [installed]  
python3-apport/bionic-updates,now 2.20.9-0ubuntu7.6 all [installed]  
python3-apt/bionic-updates,now 1.6.4 amd64 [installed]  
python3-asn1crypto/bionic,now 0.24.0-1 all [installed]  
python3-attr/bionic,now 17.4.0-2 all [installed]  
python3-automat/bionic,now 0.6.0-1 all [installed]  
python3-blinker/bionic,now 1.4+dfsg1-0.1 all [installed]  
python3-certifi/bionic,now 2018.1.18-2 all [installed]  
python3-cffi-backend/bionic,now 1.11.5-1 amd64 [installed]  
python3-chardet/bionic,now 3.0.4-1 all [installed]  
python3-click/bionic,now 6.7-3 all [installed]  
python3-colorama/bionic,now 0.3.7-1 all [installed]  
python3-commandnotfound/bionic-updates,now 18.04.5 all [installed]  
python3-configobj/bionic,now 5.0.6-2 all [installed]  
python3-constantly/bionic,now 15.1.0-1 all [installed]  
python3-cryptography/bionic-updates,now 2.1.4-1ubuntu1.3 amd64 [installed]  
python3-dbus/bionic,now 1.2.6-1 amd64 [installed]  
python3-debconf/bionic-updates,now 1.5.66ubuntu1 all [installed]  
python3-debian/bionic,now 0.1.32 all [installed]  
python3-distro-info/bionic-updates,now 0.18ubuntu0.18.04.1 all [installed]  
python3-distupgrade/bionic-updates,now 1:18.04.33 all [installed]  
python3-gdbm/bionic-updates,now 3.6.8-1~18.04 amd64 [installed]  
python3-gi/bionic-updates,now 3.26.1-2ubuntu1 amd64 [installed]  
python3-httpplib2/bionic-updates,now 0.9.2+dfsg-1ubuntu0.1 all [installed]  
python3-hyperlink/bionic,now 17.3.1-2 all [installed]  
python3-idna/bionic,now 2.6-1 all [installed]  
python3-incremental/bionic,now 16.10.1-3 all [installed]  
python3-jinja2/bionic-updates,bionic-security,now 2.10-1ubuntu0.18.04.1 all [installed]  
python3-json-pointer/bionic,now 1.10-1 all [installed]  
python3-jsonpatch/bionic,now 1.19+really1.16-1fakesync1 all [installed]  
python3-jsonschema/bionic,now 2.6.0-2 all [installed]  
python3-jwt/bionic,now 1.5.3+ds1-1 all [installed]  
python3-markupsafe/bionic,now 1.0-1build1 amd64 [installed]

```
python3-minimal/bionic-updates,now 3.6.7-1~18.04 amd64 [installed]
python3-netifaces/bionic,now 0.10.4-0.1build4 amd64 [installed,automatic]
python3-newt/bionic,now 0.52.20-1ubuntu1 amd64 [installed]
python3-oauthlib/bionic,now 2.0.6-1 all [installed]
python3-openssl/bionic,now 17.5.0-1ubuntu1 all [installed]
python3-pam/bionic,now 0.4.2-13.2ubuntu4 amd64 [installed]
python3-pkg-resources/bionic,now 39.0.1-2 all [installed]
python3-problem-report/bionic-updates,now 2.20.9-0ubuntu7.6 all [installed]
python3-pyasn1/bionic,now 0.4.2-3 all [installed]
python3-pyasn1-modules/bionic,now 0.2.1-0.2 all [installed]
python3-requests/bionic-updates,bionic-security,now 2.18.4-2ubuntu0.1 all
[installed]
python3-requests-unixsocket/bionic,now 0.1.5-3 all [installed]
python3-serial/bionic,now 3.4-2 all [installed]
python3-service-identity/bionic,now 16.0.0-2 all [installed]
python3-six/bionic,now 1.11.0-2 all [installed]
python3-software-properties/bionic-updates,now 0.96.24.32.9 all [installed]
python3-systemd/bionic,now 234-1build1 amd64 [installed]
python3-twisted/bionic,now 17.9.0-2 all [installed]
python3-twisted-bin/bionic,now 17.9.0-2 amd64 [installed]
python3-update-manager/bionic-updates,now 1:18.04.11.10 all [installed]
python3-urllib3/bionic-updates,bionic-security,now 1.22-1ubuntu0.18.04.1 all
[installed]
python3-yaml/bionic,now 3.12-1build2 amd64 [installed]
python3-zope.interface/bionic,now 4.3.2-1build2 amd64 [installed]
python3.6/bionic-updates,now 3.6.8-1~18.04.1 amd64 [installed]
python3.6-minimal/bionic-updates,now 3.6.8-1~18.04.1 amd64 [installed]
readline-common/bionic,now 7.0-3 all [installed]
rsync/bionic,now 3.1.2-2.1ubuntu1 amd64 [installed]
rsyslog/bionic,now 8.32.0-1ubuntu4 amd64 [installed]
run-one/bionic,now 1.17-0ubuntu1 all [installed]
screen/bionic-updates,now 4.6.2-1ubuntu1 amd64 [installed]
sed/bionic,now 4.4-2 amd64 [installed]
sensible-utils/bionic,now 0.0.12 all [installed]
shared-mime-info/bionic,now 1.9-2 amd64 [installed]
snapd/bionic-updates,now 2.39.2+18.04 amd64 [installed]
software-properties-common/bionic-updates,now 0.96.24.32.9 all [installed]
sosreport/bionic-updates,now 3.6-1ubuntu0.18.04.2 amd64 [installed]
squashfs-tools/bionic-updates,now 1:4.3-6ubuntu0.18.04.1 amd64 [installed]
ssh-import-id/bionic-updates,now 5.7-0ubuntu1.1 all [installed]
strace/bionic,now 4.21-1ubuntu1 amd64 [installed]
sudo/bionic,now 1.8.21p2-3ubuntu1 amd64 [installed]
```

systemd/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
systemd-sysv/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
sysvinit-utils/bionic,now 2.88dsf-59.10ubuntu1 amd64 [installed]  
tar/bionic-updates,now 1.29b-2ubuntu0.1 amd64 [installed]  
tcpdump/bionic,now 4.9.2-3 amd64 [installed]  
telnet/bionic,now 0.17-41 amd64 [installed]  
time/bionic,now 1.7-25.1build1 amd64 [installed]  
tmux/bionic-updates,now 2.6-3ubuntu0.1 amd64 [installed]  
tzdata/bionic-updates,bionic-security,now 2019a-0ubuntu0.18.04 all [installed]  
ubuntu-advantage-tools/bionic,now 17 all [installed]  
ubuntu-keyring/bionic-updates,now 2018.09.18.1~18.04.0 all [installed]  
ubuntu-minimal/bionic-updates,now 1.417.1 amd64 [installed]  
ubuntu-release-upgrader-core/bionic-updates,now 1:18.04.33 all [installed]  
ubuntu-server/bionic-updates,now 1.417.1 amd64 [installed]  
ubuntu-standard/bionic-updates,now 1.417.1 amd64 [installed]  
ucf/bionic,now 3.0038 all [installed]  
udev/bionic-updates,now 237-3ubuntu10.23 amd64 [installed]  
ufw/bionic-updates,now 0.36-0ubuntu0.18.04.1 all [installed]  
uidmap/bionic-updates,now 1:4.5-1ubuntu2 amd64 [installed]  
unattended-upgrades/bionic-updates,now 1.1ubuntu1.18.04.11 all [installed]  
update-manager-core/bionic-updates,now 1:18.04.11.10 all [installed]  
update-notifier-common/bionic-updates,now 3.192.1.7 all [installed]  
ureadahead/bionic-updates,now 0.100.0-21 amd64 [installed]  
usbutils/bionic,now 1:007-4build1 amd64 [installed]  
util-linux/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
uuid-runtime/bionic-updates,now 2.31.1-0.4ubuntu3.3 amd64 [installed]  
vim/bionic-updates,bionic-security,now 2:8.0.1453-1ubuntu1.1 amd64 [installed]  
vim-common/bionic-updates,bionic-security,now 2:8.0.1453-1ubuntu1.1 all [installed]  
vim-runtime/bionic-updates,bionic-security,now 2:8.0.1453-1ubuntu1.1 all [installed]  
vim-tiny/bionic-updates,bionic-security,now 2:8.0.1453-1ubuntu1.1 amd64 [installed]  
wget/bionic-updates,bionic-security,now 1.19.4-1ubuntu2.2 amd64 [installed]  
whiptail/bionic,now 0.52.20-1ubuntu1 amd64 [installed]  
xauth/bionic,now 1:1.0.10-1 amd64 [installed]  
xdelta3/bionic,now 3.0.11-dfsg-1ubuntu1 amd64 [installed]  
xdg-user-dirs/bionic,now 0.17-1ubuntu1 amd64 [installed]  
xfsprogs/bionic,now 4.9.0+nmu1ubuntu2 amd64 [installed]  
xkb-data/bionic,now 2.23.1-1ubuntu1 all [installed]  
xxd/bionic-updates,bionic-security,now 2:8.0.1453-1ubuntu1.1 amd64 [installed]  
xz-utils/bionic,now 5.2.2-1.3 amd64 [installed]

```
zerofree/bionic,now 1.0.4-1 amd64 [installed]
zlib1g/bionic,now 1:1.2.11.dfsg-0ubuntu2 amd64 [installed]
```

## 10. Provide transcripts showing the output of the commands you use to update your package database and upgrade packages on each of your instances.

```
ubuntu@ip-10-0-6-235: sudo apt update
●[33m
0% [Working]●[0m

Hit:1 http://us-west-2.ec2.archive.ubuntu.com/ubuntu bionic InRelease
●[33m
0% [Waiting for headers]●[0m

Hit:2 http://us-west-2.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease

Hit:3 http://us-west-2.ec2.archive.ubuntu.com/ubuntu bionic-backports
InRelease
●[33m
0% [Waiting for headers]●[0m●[33m
0% [1 InRelease gpgv 242 kB] [Waiting for headers]●[0m

Hit:4 http://security.ubuntu.com/ubuntu bionic-security InRelease
●[33m

0% [1 InRelease gpgv 242 kB]●[0m●[33m

0% [Working]●[0m●[33m
0% [2 InRelease gpgv 88.7 kB]●[0m●[33m

0% [Working]●[0m●[33m
0% [3 InRelease gpgv 74.6 kB]●[0m●[33m

0% [Working]●[0m●[33m
0% [4 InRelease gpgv 88.7 kB]●[0m●[33m

20% [Working]●[0m
```











