Create a subdirectory in your team git repository with the name "week2" and create files containing your hand-in materials under that.

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

|  |  |  |
| --- | --- | --- |
| Chilled Beer 1 | Chilled Beer 2 | Chilled Beer 3 |
| i-8ed65153 | i-8fd65152 | i-a5149b78 |
| 10.0.1.24 | 10.0.1.25 | 10.0.3.78 |
|  |  |  |

1. 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.)

|  |  |  |
| --- | --- | --- |
| Chilled Beer 1 | Chilled Beer 2 | Chilled Beer 3 |
| 52.41.114.211 | 52.40.223.58 | 52.41.47.89 |

* In the EC2 -> Instance section -> Select the specific instance -> Description (selecting multiple instances will disable this option) -> The value is under the public IP.

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

ubuntu@ip-10-0-1-25:~$ df -h

Filesystem Size Used Avail Use% Mounted on

udev 240M 12K 240M 1% /dev

tmpfs 49M 324K 49M 1% /run

/dev/xvda1 7.8G 921M 6.5G 13% /

none 4.0K 0 4.0K 0% /sys/fs/cgroup

none 5.0M 0 5.0M 0% /run/lock

none 245M 0 245M 0% /run/shm

none 100M 0 100M 0% /run/user

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

ubuntu@ip-10-0-1-25:~$ df

Filesystem 1K-blocks Used Available Use% Mounted on

udev 245172 12 245160 1% /dev

tmpfs 50028 324 49704 1% /run

/dev/xvda1 8115168 942896 6736996 13% /

none 4 0 4 0% /sys/fs/cgroup

none 5120 0 5120 0% /run/lock

none 250120 0 250120 0% /run/shm

none 102400 0 102400 0% /run/user

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

ubuntu@ip-10-0-1-25:~$ ps

PID TTY TIME CMD

9900 pts/0 00:00:00 bash

10034 pts/0 00:00:00 ps

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

ubuntu@ip-10-0-1-25:~$ ifconfig

eth0 Link encap:Ethernet HWaddr 0a:d6:91:9c:51:27

inet addr:10.0.1.25 Bcast:10.0.1.255 Mask:255.255.255.0

inet6 addr: fe80::8d6:91ff:fe9c:5127/64 Scope:Link

UP BROADCAST RUNNING MULTICAST MTU:9001 Metric:1

RX packets:57912 errors:0 dropped:0 overruns:0 frame:0

TX packets:42444 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:35336573 (35.3 MB) TX bytes:7242847 (7.2 MB)

lo Link encap:Local Loopback

inet addr:127.0.0.1 Mask:255.0.0.0

inet6 addr: ::1/128 Scope:Host

UP LOOPBACK RUNNING MTU:65536 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

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

ubuntu@ip-10-0-1-25:~$ route

Kernel IP routing table

Destination Gateway Genmask Flags Metric Ref Use Iface

default ip-10-0-1-1.us- 0.0.0.0 UG 0 0 0 eth0

10.0.1.0 \* 255.255.255.0 U 0 0 0 eth0

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

ubuntu@ip-10-0-1-25:~$ netstat -F

Active Internet connections (w/o servers)

Proto Recv-Q Send-Q Local Address Foreign Address State

tcp 0 300 ip-10-0-1-25.us-wes:ssh c-73-96-91-112.hs:50022 ESTABLISHED

tcp 0 0 ip-10-0-1-25.us-wes:ssh 121.18.238.29:33173 TIME\_WAIT

Active UNIX domain sockets (w/o servers)

Proto RefCnt Flags Type State I-Node Path

unix 5 [ ] DGRAM 8913 /dev/log

unix 3 [ ] STREAM CONNECTED 8734

unix 2 [ ] DGRAM 9094

unix 3 [ ] STREAM CONNECTED 8673 /var/run/dbus/system\_bus\_socket

unix 3 [ ] STREAM CONNECTED 7931

unix 3 [ ] STREAM CONNECTED 8672

unix 3 [ ] STREAM CONNECTED 63388

unix 3 [ ] STREAM CONNECTED 63566 /var/run/dbus/system\_bus\_socket

unix 3 [ ] STREAM CONNECTED 8735 /var/run/dbus/system\_bus\_socket

unix 3 [ ] STREAM CONNECTED 8610

unix 2 [ ] DGRAM 9521

unix 3 [ ] DGRAM 7486

unix 3 [ ] STREAM CONNECTED 7934 @/com/ubuntu/upstart

unix 3 [ ] STREAM CONNECTED 8670

unix 3 [ ] STREAM CONNECTED 8669

unix 2 [ ] DGRAM 63203

unix 3 [ ] STREAM CONNECTED 7433

unix 3 [ ] DGRAM 7487

unix 3 [ ] STREAM CONNECTED 63565

unix 3 [ ] STREAM CONNECTED 63387

unix 3 [ ] STREAM CONNECTED 8644 @/com/ubuntu/upstart

unix 3 [ ] STREAM CONNECTED 7446 @/com/ubuntu/upstart

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

ubuntu@ip-10-0-1-25:~$ dpkg -l

Desired=Unknown/Install/Remove/Purge/Hold

| Status=Not/Inst/Conf-files/Unpacked/halF-conf/Half-inst/trig-aWait/Trig-pend

|/ Err?=(none)/Reinst-required (Status,Err: uppercase=bad)

||/ Name Version Architecture Description

+++-==================-==============-==============-==========================================

ii accountsservice 0.6.35-0ubuntu amd64 query and manipulate user account informat

ii acpid 1:2.0.21-1ubun amd64 Advanced Configuration and Power Interface

ii adduser 3.113+nmu3ubun all add and remove users and groups

ii apparmor 2.8.95~2430-0u amd64 User-space parser utility for AppArmor

ii apport 2.14.1-0ubuntu all automatically generate crash reports for d

ii apport-symptoms 0.20 all symptom scripts for apport

ii apt 1.0.1ubuntu2.1 amd64 commandline package manager

ii apt-transport-http 1.0.1ubuntu2.1 amd64 https download transport for APT

ii apt-utils 1.0.1ubuntu2.1 amd64 package management related utility program

ii apt-xapian-index 0.45ubuntu4 all maintenance and search tools for a Xapian

ii aptitude 0.6.8.2-1ubunt amd64 terminal-based package manager

ii aptitude-common 0.6.8.2-1ubunt all architecture indepedent files for the apti

ii at 3.1.14-1ubuntu amd64 Delayed job execution and batch processing

ii base-files 7.2ubuntu5.3 amd64 Debian base system miscellaneous files

ii base-passwd 3.5.33 amd64 Debian base system master password and gro

ii bash 4.3-7ubuntu1.5 amd64 GNU Bourne Again SHell

ii bash-completion 1:2.1-4ubuntu0 all programmable completion for the bash shell

ii bc 1.06.95-8ubunt amd64 GNU bc arbitrary precision calculator lang

ii bind9-host 1:9.9.5.dfsg-3 amd64 Version of 'host' bundled with BIND 9.X

ii bsdmainutils 9.0.5ubuntu1 amd64 collection of more utilities from FreeBSD

ii bsdutils 1:2.20.1-5.1ub amd64 Basic utilities from 4.4BSD-Lite

ii busybox-initramfs 1:1.21.0-1ubun amd64 Standalone shell setup for initramfs

ii busybox-static 1:1.21.0-1ubun amd64 Standalone rescue shell with tons of built

ii byobu 5.77-0ubuntu1. all powerful, text based window manager and sh

ii bzip2 1.0.6-5 amd64 high-quality block-sorting file compressor

ii ca-certificates 20141019ubuntu all Common CA certificates

ii cloud-guest-utils 0.27-0ubuntu9. all cloud guest utilities

ii cloud-init 0.7.5-0ubuntu1 all Init scripts for cloud instances

ii command-not-found 0.3ubuntu12 all Suggest installation of packages in intera

ii command-not-found- 0.3ubuntu12 amd64 Set of data files for command-not-found.

ii console-setup 1.70ubuntu8 all console font and keymap setup program

ii coreutils 8.21-1ubuntu5. amd64 GNU core utilities

ii cpio 2.11+dfsg-1ubu amd64 GNU cpio -- a program to manage archives o

ii cron 3.0pl1-124ubun amd64 process scheduling daemon

ii cryptsetup 2:1.6.1-1ubunt amd64 disk encryption support - startup scripts

ii cryptsetup-bin 2:1.6.1-1ubunt amd64 disk encryption support - command line too

ii curl 7.35.0-1ubuntu amd64 command line tool for transferring data wi

ii dash 0.5.7-4ubuntu1 amd64 POSIX-compliant shell

ii dbus 1.6.18-0ubuntu amd64 simple interprocess messaging system (daem

ii debconf 1.5.51ubuntu2 all Debian configuration management system

ii debconf-i18n 1.5.51ubuntu2 all full internationalization support for debc

ii debianutils 4.4 amd64 Miscellaneous utilities specific to Debian

ii dh-python 1.20140128-1ub all Debian helper tools for packaging Python l

ii diffutils 1:3.3-1 amd64 File comparison utilities

ii dmidecode 2.12-2 amd64 SMBIOS/DMI table decoder

ii dmsetup 2:1.02.77-6ubu amd64 Linux Kernel Device Mapper userspace libra

ii dnsutils 1:9.9.5.dfsg-3 amd64 Clients provided with BIND

ii dosfstools 3.0.26-1 amd64 utilities for making and checking MS-DOS F

ii dpkg 1.17.5ubuntu5. amd64 Debian package management system

ii e2fslibs:amd64 1.42.9-3ubuntu amd64 ext2/ext3/ext4 file system libraries

ii e2fsprogs 1.42.9-3ubuntu amd64 ext2/ext3/ext4 file system utilities

ii eatmydata 26-2 amd64 library and utilities designed to disable

ii ed 1.9-2 amd64 classic UNIX line editor

ii eject 2.1.5+deb1+cvs amd64 ejects CDs and operates CD-Changers under

ii ethtool 1:3.13-1 amd64 display or change Ethernet device settings

ii file 1:5.14-2ubuntu amd64 Determines file type using "magic" numbers

ii findutils 4.4.2-7 amd64 utilities for finding files--find, xargs

ii fonts-ubuntu-font- 0.80-0ubuntu6 all Ubuntu Font Family Linux console fonts, sa

ii friendly-recovery 0.2.25 all Make recovery more user-friendly

ii ftp 0.17-28 amd64 classical file transfer client

ii fuse 2.9.2-4ubuntu4 amd64 Filesystem in Userspace

ii gawk 1:4.0.1+dfsg-2 amd64 GNU awk, a pattern scanning and processing

ii gcc-4.8-base:amd64 4.8.4-2ubuntu1 amd64 GCC, the GNU Compiler Collection (base pac

ii gcc-4.9-base:amd64 4.9.3-0ubuntu4 amd64 GCC, the GNU Compiler Collection (base pac

ii gdisk 0.8.8-1ubuntu0 amd64 GPT fdisk text-mode partitioning tool

ii geoip-database 20140313-1 all IP lookup command line tools that use the

ii gettext-base 0.18.3.1-1ubun amd64 GNU Internationalization utilities for the

ii gir1.2-glib-2.0 1.40.0-1ubuntu amd64 Introspection data for GLib, GObject, Gio

ii gnupg 1.4.16-1ubuntu amd64 GNU privacy guard - a free PGP replacement

ii gpgv 1.4.16-1ubuntu amd64 GNU privacy guard - signature verification

ii grep 2.16-1 amd64 GNU grep, egrep and fgrep

ii groff-base 1.22.2-5 amd64 GNU troff text-formatting system (base sys

ii grub-common 2.02~beta2-9ub amd64 GRand Unified Bootloader (common files)

ii grub-gfxpayload-li 0.6 amd64 GRUB gfxpayload blacklist

ii grub-legacy-ec2 0.7.5-0ubuntu1 all Handles update-grub for ec2 instances

ii grub-pc 2.02~beta2-9ub amd64 GRand Unified Bootloader, version 2 (PC/BI

ii grub-pc-bin 2.02~beta2-9ub amd64 GRand Unified Bootloader, version 2 (PC/BI

ii grub2-common 2.02~beta2-9ub amd64 GRand Unified Bootloader (common files for

ii gzip 1.6-3ubuntu1 amd64 GNU compression utilities

ii hdparm 9.43-1ubuntu3 amd64 tune hard disk parameters for high perform

ii hostname 3.15ubuntu1 amd64 utility to set/show the host name or domai

ii ifupdown 0.7.47.2ubuntu amd64 high level tools to configure network inte

ii info 5.2.0.dfsg.1-2 amd64 Standalone GNU Info documentation browser

ii init-system-helper 1.14 all helper tools for all init systems

ii initramfs-tools 0.103ubuntu4.2 all tools for generating an initramfs

ii initramfs-tools-bi 0.103ubuntu4.2 amd64 binaries used by initramfs-tools

ii initscripts 2.88dsf-41ubun amd64 scripts for initializing and shutting down

ii insserv 1.14.0-5ubuntu amd64 boot sequence organizer using LSB init.d s

ii install-info 5.2.0.dfsg.1-2 amd64 Manage installed documentation in info for

ii iproute2 3.12.0-2ubuntu amd64 networking and traffic control tools

ii iptables 1.4.21-1ubuntu amd64 administration tools for packet filtering

ii iputils-ping 3:20121221-4ub amd64 Tools to test the reachability of network

ii iputils-tracepath 3:20121221-4ub amd64 Tools to trace the network path to a remot

ii irqbalance 1.0.6-2ubuntu0 amd64 Daemon to balance interrupts for SMP syste

ii isc-dhcp-client 4.2.4-7ubuntu1 amd64 ISC DHCP client

ii isc-dhcp-common 4.2.4-7ubuntu1 amd64 common files used by all the isc-dhcp\* pac

ii iso-codes 3.52-1 all ISO language, territory, currency, script

ii kbd 1.15.5-1ubuntu amd64 Linux console font and keytable utilities

ii keyboard-configura 1.70ubuntu8 all system-wide keyboard preferences

ii klibc-utils 2.0.3-0ubuntu1 amd64 small utilities built with klibc for early

ii kmod 15-0ubuntu6 amd64 tools for managing Linux kernel modules

ii krb5-locales 1.12+dfsg-2ubu all Internationalization support for MIT Kerbe

ii landscape-client 14.12-0ubuntu0 amd64 The Landscape administration system client

ii landscape-common 14.12-0ubuntu0 amd64 The Landscape administration system client

ii language-selector- 0.129.3 all Language selector for Ubuntu

ii laptop-detect 0.13.7ubuntu2 amd64 attempt to detect a laptop

ii less 458-2 amd64 pager program similar to more

ii libaccountsservice 0.6.35-0ubuntu amd64 query and manipulate user account informat

ii libacl1:amd64 2.2.52-1 amd64 Access control list shared library

ii libapparmor-perl 2.8.95~2430-0u amd64 AppArmor library Perl bindings

ii libapparmor1:amd64 2.8.95~2430-0u amd64 changehat AppArmor library

ii libapt-inst1.5:amd 1.0.1ubuntu2.1 amd64 deb package format runtime library

ii libapt-pkg4.12:amd 1.0.1ubuntu2.1 amd64 package management runtime library

ii libarchive-extract 0.70-1 all generic archive extracting module

ii libasn1-8-heimdal: 1.6~git2013120 amd64 Heimdal Kerberos - ASN.1 library

ii libasprintf0c2:amd 0.18.3.1-1ubun amd64 GNU library to use fprintf and friends in

ii libattr1:amd64 1:2.4.47-1ubun amd64 Extended attribute shared library

ii libaudit-common 1:2.3.2-2ubunt all Dynamic library for security auditing - co

ii libaudit1:amd64 1:2.3.2-2ubunt amd64 Dynamic library for security auditing

ii libbind9-90 1:9.9.5.dfsg-3 amd64 BIND9 Shared Library used by BIND

ii libblkid1:amd64 2.20.1-5.1ubun amd64 block device id library

ii libboost-iostreams 1.54.0-4ubuntu amd64 Boost.Iostreams Library

ii libbsd0:amd64 0.6.0-2ubuntu1 amd64 utility functions from BSD systems - share

ii libbz2-1.0:amd64 1.0.6-5 amd64 high-quality block-sorting file compressor

ii libc-bin 2.19-0ubuntu6. amd64 Embedded GNU C Library: Binaries

ii libc6:amd64 2.19-0ubuntu6. amd64 Embedded GNU C Library: Shared libraries

ii libcap-ng0 0.7.3-1ubuntu2 amd64 An alternate POSIX capabilities library

ii libcap2:amd64 1:2.24-0ubuntu amd64 support for getting/setting POSIX.1e capab

ii libcap2-bin 1:2.24-0ubuntu amd64 basic utility programs for using capabilit

ii libcgmanager0:amd6 0.24-0ubuntu7. amd64 Central cgroup manager daemon (client libr

ii libck-connector0:a 0.4.5-3.1ubunt amd64 ConsoleKit libraries

ii libclass-accessor- 0.34-1 all Perl module that automatically generates a

ii libcomerr2:amd64 1.42.9-3ubuntu amd64 common error description library

ii libcryptsetup4 2:1.6.1-1ubunt amd64 disk encryption support - shared library

ii libcurl3:amd64 7.35.0-1ubuntu amd64 easy-to-use client-side URL transfer libra

ii libcurl3-gnutls:am 7.35.0-1ubuntu amd64 easy-to-use client-side URL transfer libra

ii libcwidget3 0.5.16-3.5ubun amd64 high-level terminal interface library for

ii libdb5.3:amd64 5.3.28-3ubuntu amd64 Berkeley v5.3 Database Libraries [runtime]

ii libdbus-1-3:amd64 1.6.18-0ubuntu amd64 simple interprocess messaging system (libr

ii libdbus-glib-1-2:a 0.100.2-1 amd64 simple interprocess messaging system (GLib

ii libdebconfclient0: 0.187ubuntu1 amd64 Debian Configuration Management System (C-

ii libdevmapper1.02.1 2:1.02.77-6ubu amd64 Linux Kernel Device Mapper userspace libra

ii libdns100 1:9.9.5.dfsg-3 amd64 DNS Shared Library used by BIND

ii libdrm2:amd64 2.4.60-2~ubunt amd64 Userspace interface to kernel DRM services

ii libdumbnet1 1.12-4build1 amd64 A dumb, portable networking library -- sha

ii libedit2:amd64 3.1-20130712-2 amd64 BSD editline and history libraries

ii libelf1:amd64 0.158-0ubuntu5 amd64 library to read and write ELF files

ii libept1.4.12:amd64 1.0.12 amd64 High-level library for managing Debian pac

ii libestr0 0.1.9-0ubuntu2 amd64 Helper functions for handling strings (lib

ii libevent-2.0-5:amd 2.0.21-stable- amd64 Asynchronous event notification library

ii libexpat1:amd64 2.1.0-4ubuntu1 amd64 XML parsing C library - runtime library

ii libffi6:amd64 3.1~rc1+r3.0.1 amd64 Foreign Function Interface library runtime

ii libfreetype6:amd64 2.5.2-1ubuntu2 amd64 FreeType 2 font engine, shared library fil

ii libfribidi0:amd64 0.19.6-1 amd64 Free Implementation of the Unicode BiDi al

ii libfuse2:amd64 2.9.2-4ubuntu4 amd64 Filesystem in Userspace (library)

ii libgc1c2:amd64 1:7.2d-5ubuntu amd64 conservative garbage collector for C and C

ii libgcc1:amd64 1:4.9.3-0ubunt amd64 GCC support library

ii libgck-1-0:amd64 3.10.1-1 amd64 Glib wrapper library for PKCS#11 - runtime

ii libgcr-3-common 3.10.1-1 all Library for Crypto UI related tasks - comm

ii libgcr-base-3-1:am 3.10.1-1 amd64 Library for Crypto related tasks

ii libgcrypt11:amd64 1.5.3-2ubuntu4 amd64 LGPL Crypto library - runtime library

ii libgdbm3:amd64 1.8.3-12build1 amd64 GNU dbm database routines (runtime version

ii libgeoip1:amd64 1.6.0-1 amd64 non-DNS IP-to-country resolver library

ii libgirepository-1. 1.40.0-1ubuntu amd64 Library for handling GObject introspection

ii libglib2.0-0:amd64 2.40.2-0ubuntu amd64 GLib library of C routines

ii libglib2.0-data 2.40.2-0ubuntu all Common files for GLib library

ii libgnutls-openssl2 2.12.23-12ubun amd64 GNU TLS library - OpenSSL wrapper

ii libgnutls26:amd64 2.12.23-12ubun amd64 GNU TLS library - runtime library

ii libgpg-error0:amd6 1.12-0.2ubuntu amd64 library for common error values and messag

ii libgpm2:amd64 1.20.4-6.1 amd64 General Purpose Mouse - shared library

ii libgssapi-krb5-2:a 1.12+dfsg-2ubu amd64 MIT Kerberos runtime libraries - krb5 GSS-

ii libgssapi3-heimdal 1.6~git2013120 amd64 Heimdal Kerberos - GSSAPI support library

ii libhcrypto4-heimda 1.6~git2013120 amd64 Heimdal Kerberos - crypto library

ii libheimbase1-heimd 1.6~git2013120 amd64 Heimdal Kerberos - Base library

ii libheimntlm0-heimd 1.6~git2013120 amd64 Heimdal Kerberos - NTLM support library

ii libhx509-5-heimdal 1.6~git2013120 amd64 Heimdal Kerberos - X509 support library

ii libicu52:amd64 52.1-3ubuntu0. amd64 International Components for Unicode

ii libidn11:amd64 1.28-1ubuntu2 amd64 GNU Libidn library, implementation of IETF

ii libio-string-perl 1.08-3 all Emulate IO::File interface for in-core str

ii libisc95 1:9.9.5.dfsg-3 amd64 ISC Shared Library used by BIND

ii libisccc90 1:9.9.5.dfsg-3 amd64 Command Channel Library used by BIND

ii libisccfg90 1:9.9.5.dfsg-3 amd64 Config File Handling Library used by BIND

ii libjson-c2:amd64 0.11-3ubuntu1. amd64 JSON manipulation library - shared library

ii libjson0:amd64 0.11-3ubuntu1. amd64 JSON manipulation library (transitional pa

ii libk5crypto3:amd64 1.12+dfsg-2ubu amd64 MIT Kerberos runtime libraries - Crypto Li

ii libkeyutils1:amd64 1.5.6-1 amd64 Linux Key Management Utilities (library)

ii libklibc 2.0.3-0ubuntu1 amd64 minimal libc subset for use with initramfs

ii libkmod2:amd64 15-0ubuntu6 amd64 libkmod shared library

ii libkrb5-26-heimdal 1.6~git2013120 amd64 Heimdal Kerberos - libraries

ii libkrb5-3:amd64 1.12+dfsg-2ubu amd64 MIT Kerberos runtime libraries

ii libkrb5support0:am 1.12+dfsg-2ubu amd64 MIT Kerberos runtime libraries - Support l

ii libldap-2.4-2:amd6 2.4.31-1+nmu2u amd64 OpenLDAP libraries

ii liblocale-gettext- 1.05-7build3 amd64 module using libc functions for internatio

ii liblockfile-bin 1.09-6ubuntu1 amd64 support binaries for and cli utilities bas

ii liblockfile1:amd64 1.09-6ubuntu1 amd64 NFS-safe locking library

ii liblog-message-sim 0.10-1 all simplified interface to Log::Message

ii liblwres90 1:9.9.5.dfsg-3 amd64 Lightweight Resolver Library used by BIND

ii liblzma5:amd64 5.1.1alpha+201 amd64 XZ-format compression library

ii libmagic1:amd64 1:5.14-2ubuntu amd64 File type determination library using "mag

ii libmodule-pluggabl 5.1-1 all module for giving modules the ability to

ii libmount1:amd64 2.20.1-5.1ubun amd64 block device id library

ii libmpdec2:amd64 2.4.0-6 amd64 library for decimal floating point arithme

ii libncurses5:amd64 5.9+20140118-1 amd64 shared libraries for terminal handling

ii libncursesw5:amd64 5.9+20140118-1 amd64 shared libraries for terminal handling (wi

ii libnewt0.52:amd64 0.52.15-2ubunt amd64 Not Erik's Windowing Toolkit - text mode w

ii libnfnetlink0:amd6 1.0.1-2 amd64 Netfilter netlink library

ii libnih-dbus1:amd64 1.0.3-4ubuntu2 amd64 NIH D-Bus Bindings Library

ii libnih1:amd64 1.0.3-4ubuntu2 amd64 NIH Utility Library

ii libnuma1:amd64 2.0.9~rc5-1ubu amd64 Libraries for controlling NUMA policy

ii libp11-kit0:amd64 0.20.2-2ubuntu amd64 Library for loading and coordinating acces

ii libpam-cap:amd64 1:2.24-0ubuntu amd64 PAM module for implementing capabilities

ii libpam-modules:amd 1.1.8-1ubuntu2 amd64 Pluggable Authentication Modules for PAM

ii libpam-modules-bin 1.1.8-1ubuntu2 amd64 Pluggable Authentication Modules for PAM -

ii libpam-runtime 1.1.8-1ubuntu2 all Runtime support for the PAM library

ii libpam-systemd:amd 204-5ubuntu20. amd64 system and service manager - PAM module

ii libpam0g:amd64 1.1.8-1ubuntu2 amd64 Pluggable Authentication Modules library

ii libparse-debiancha 1.2.0-1ubuntu1 all parse Debian changelogs and output them in

ii libparted0debian1: 2.3-19ubuntu1. amd64 disk partition manipulator - shared librar

ii libpcap0.8:amd64 1.5.3-2 amd64 system interface for user-level packet cap

ii libpci3:amd64 1:3.2.1-1ubunt amd64 Linux PCI Utilities (shared library)

ii libpcre3:amd64 1:8.31-2ubuntu amd64 Perl 5 Compatible Regular Expression Libra

ii libpipeline1:amd64 1.3.0-1 amd64 pipeline manipulation library

ii libplymouth2:amd64 0.8.8-0ubuntu1 amd64 graphical boot animation and logger - shar

ii libpng12-0:amd64 1.2.50-1ubuntu amd64 PNG library - runtime

ii libpod-latex-perl 0.61-1 all module to convert Pod data to formatted La

ii libpolkit-agent-1- 0.105-4ubuntu3 amd64 PolicyKit Authentication Agent API

ii libpolkit-backend- 0.105-4ubuntu3 amd64 PolicyKit backend API

ii libpolkit-gobject- 0.105-4ubuntu3 amd64 PolicyKit Authorization API

ii libpopt0:amd64 1.16-8ubuntu1 amd64 lib for parsing cmdline parameters

ii libprocps3:amd64 1:3.3.9-1ubunt amd64 library for accessing process information

ii libpython-stdlib:a 2.7.5-5ubuntu3 amd64 interactive high-level object-oriented lan

ii libpython2.7:amd64 2.7.6-8ubuntu0 amd64 Shared Python runtime library (version 2.7

ii libpython2.7-minim 2.7.6-8ubuntu0 amd64 Minimal subset of the Python language (ver

ii libpython2.7-stdli 2.7.6-8ubuntu0 amd64 Interactive high-level object-oriented lan

ii libpython3-stdlib: 3.4.0-0ubuntu2 amd64 interactive high-level object-oriented lan

ii libpython3.4-minim 3.4.3-1ubuntu1 amd64 Minimal subset of the Python language (ver

ii libpython3.4-stdli 3.4.3-1ubuntu1 amd64 Interactive high-level object-oriented lan

ii libreadline6:amd64 6.3-4ubuntu2 amd64 GNU readline and history libraries, run-ti

ii libroken18-heimdal 1.6~git2013120 amd64 Heimdal Kerberos - roken support library

ii librtmp0:amd64 2.4+20121230.g amd64 toolkit for RTMP streams (shared library)

ii libsasl2-2:amd64 2.1.25.dfsg1-1 amd64 Cyrus SASL - authentication abstraction li

ii libsasl2-modules:a 2.1.25.dfsg1-1 amd64 Cyrus SASL - pluggable authentication modu

ii libsasl2-modules-d 2.1.25.dfsg1-1 amd64 Cyrus SASL - pluggable authentication modu

ii libselinux1:amd64 2.2.2-1ubuntu0 amd64 SELinux runtime shared libraries

ii libsemanage-common 2.2-1 all Common files for SELinux policy management

ii libsemanage1:amd64 2.2-1 amd64 SELinux policy management library

ii libsepol1:amd64 2.2-1ubuntu0.1 amd64 SELinux library for manipulating binary se

ii libsigc++-2.0-0c2a 2.2.10-0.2ubun amd64 type-safe Signal Framework for C++ - runti

ii libsigsegv2:amd64 2.10-2 amd64 Library for handling page faults in a port

ii libslang2:amd64 2.2.4-15ubuntu amd64 S-Lang programming library - runtime versi

ii libsqlite3-0:amd64 3.8.2-1ubuntu2 amd64 SQLite 3 shared library

ii libss2:amd64 1.42.9-3ubuntu amd64 command-line interface parsing library

ii libssl1.0.0:amd64 1.0.1f-1ubuntu amd64 Secure Sockets Layer toolkit - shared libr

ii libstdc++6:amd64 4.8.4-2ubuntu1 amd64 GNU Standard C++ Library v3

ii libsub-name-perl 0.05-1build4 amd64 module for assigning a new name to referen

ii libsystemd-daemon0 204-5ubuntu20. amd64 systemd utility library

ii libsystemd-login0: 204-5ubuntu20. amd64 systemd login utility library

ii libtasn1-6:amd64 3.4-3ubuntu0.3 amd64 Manage ASN.1 structures (runtime)

ii libterm-ui-perl 0.42-1 all Term::ReadLine UI made easy

ii libtext-charwidth- 0.04-7build3 amd64 get display widths of characters on the te

ii libtext-iconv-perl 1.7-5build2 amd64 converts between character sets in Perl

ii libtext-soundex-pe 3.4-1build1 amd64 implementation of the soundex algorithm

ii libtext-wrapi18n-p 0.06-7 all internationalized substitute of Text::Wrap

ii libtimedate-perl 2.3000-1 all collection of modules to manipulate date/t

ii libtinfo5:amd64 5.9+20140118-1 amd64 shared low-level terminfo library for term

ii libudev1:amd64 204-5ubuntu20. amd64 libudev shared library

ii libusb-0.1-4:amd64 2:0.1.12-23.3u amd64 userspace USB programming library

ii libusb-1.0-0:amd64 2:1.0.17-1ubun amd64 userspace USB programming library

ii libustr-1.0-1:amd6 1.0.4-3ubuntu2 amd64 Micro string library: shared library

ii libuuid1:amd64 2.20.1-5.1ubun amd64 Universally Unique ID library

ii libwind0-heimdal:a 1.6~git2013120 amd64 Heimdal Kerberos - stringprep implementati

ii libwrap0:amd64 7.6.q-25 amd64 Wietse Venema's TCP wrappers library

ii libx11-6:amd64 2:1.6.2-1ubunt amd64 X11 client-side library

ii libx11-data 2:1.6.2-1ubunt all X11 client-side library

ii libxapian22 1.2.16-2ubuntu amd64 Search engine library

ii libxau6:amd64 1:1.0.8-1 amd64 X11 authorisation library

ii libxcb1:amd64 1.10-2ubuntu1 amd64 X C Binding

ii libxdmcp6:amd64 1:1.1.1-1 amd64 X11 Display Manager Control Protocol libra

ii libxext6:amd64 2:1.3.2-1ubunt amd64 X11 miscellaneous extension library

ii libxml2:amd64 2.9.1+dfsg1-3u amd64 GNOME XML library

ii libxmuu1:amd64 2:1.1.1-1 amd64 X11 miscellaneous micro-utility library

ii libxtables10 1.4.21-1ubuntu amd64 netfilter xtables library

ii libyaml-0-2:amd64 0.1.4-3ubuntu3 amd64 Fast YAML 1.1 parser and emitter library

ii linux-headers-3.13 3.13.0-74.118 all Header files related to Linux kernel versi

ii linux-headers-3.13 3.13.0-74.118 amd64 Linux kernel headers for version 3.13.0 on

ii linux-headers-gene 3.13.0.74.80 amd64 Generic Linux kernel headers

ii linux-headers-virt 3.13.0.74.80 amd64 Transitional package.

ii linux-image-3.13.0 3.13.0-74.118 amd64 Linux kernel image for version 3.13.0 on 6

ii linux-image-virtua 3.13.0.74.80 amd64 This package will always depend on the lat

ii linux-virtual 3.13.0.74.80 amd64 Minimal Generic Linux kernel and headers

ii locales 2.13+git201203 all common files for locale support

ii lockfile-progs 0.1.17 amd64 Programs for locking and unlocking files a

ii login 1:4.1.5.1-1ubu amd64 system login tools

ii logrotate 3.8.7-1ubuntu1 amd64 Log rotation utility

ii lsb-base 4.1+Debian11ub all Linux Standard Base 4.1 init script functi

ii lsb-release 4.1+Debian11ub all Linux Standard Base version reporting util

ii lshw 02.16-2ubuntu1 amd64 information about hardware configuration

ii lsof 4.86+dfsg-1ubu amd64 Utility to list open files

ii ltrace 0.7.3-4ubuntu5 amd64 Tracks runtime library calls in dynamicall

ii makedev 2.3.1-93ubuntu all creates device files in /dev

ii man-db 2.6.7.1-1ubunt amd64 on-line manual pager

ii manpages 3.54-1ubuntu1 all Manual pages about using a GNU/Linux syste

ii mawk 1.3.3-17ubuntu amd64 a pattern scanning and text processing lan

ii mime-support 3.54ubuntu1.1 all MIME files 'mime.types' & 'mailcap', and s

ii mlocate 0.26-1ubuntu1 amd64 quickly find files on the filesystem based

ii module-init-tools 15-0ubuntu6 all transitional dummy package (module-init-to

ii mount 2.20.1-5.1ubun amd64 Tools for mounting and manipulating filesy

ii mountall 2.53 amd64 filesystem mounting tool

ii mtr-tiny 0.85-2 amd64 Full screen ncurses traceroute tool

ii multiarch-support 2.19-0ubuntu6. amd64 Transitional package to ensure multiarch c

ii nano 2.2.6-1ubuntu1 amd64 small, friendly text editor inspired by Pi

ii ncurses-base 5.9+20140118-1 all basic terminal type definitions

ii ncurses-bin 5.9+20140118-1 amd64 terminal-related programs and man pages

ii ncurses-term 5.9+20140118-1 all additional terminal type definitions

ii net-tools 1.60-25ubuntu2 amd64 The NET-3 networking toolkit

ii netbase 5.2 all Basic TCP/IP networking system

ii netcat-openbsd 1.105-7ubuntu1 amd64 TCP/IP swiss army knife

ii ntfs-3g 1:2013.1.13AR. amd64 read/write NTFS driver for FUSE

ii ntpdate 1:4.2.6.p5+dfs amd64 client for setting system time from NTP se

ii open-vm-tools 2:9.4.0-128054 amd64 Open VMware Tools for virtual machines hos

ii openssh-client 1:6.6p1-2ubunt amd64 secure shell (SSH) client, for secure acce

ii openssh-server 1:6.6p1-2ubunt amd64 secure shell (SSH) server, for secure acce

ii openssh-sftp-serve 1:6.6p1-2ubunt amd64 secure shell (SSH) sftp server module, for

ii openssl 1.0.1f-1ubuntu amd64 Secure Sockets Layer toolkit - cryptograph

ii os-prober 1.63ubuntu1 amd64 utility to detect other OSes on a set of d

ii overlayroot 0.25ubuntu1.14 all use an overlayfs on top of a read-only roo

ii parted 2.3-19ubuntu1. amd64 disk partition manipulator

ii passwd 1:4.1.5.1-1ubu amd64 change and administer password and group d

ii patch 2.7.1-4ubuntu2 amd64 Apply a diff file to an original

ii pciutils 1:3.2.1-1ubunt amd64 Linux PCI Utilities

ii perl 5.18.2-2ubuntu amd64 Larry Wall's Practical Extraction and Repo

ii perl-base 5.18.2-2ubuntu amd64 minimal Perl system

ii perl-modules 5.18.2-2ubuntu all Core Perl modules

ii plymouth 0.8.8-0ubuntu1 amd64 graphical boot animation and logger - main

ii plymouth-theme-ubu 0.8.8-0ubuntu1 amd64 graphical boot animation and logger - ubun

ii policykit-1 0.105-4ubuntu3 amd64 framework for managing administrative poli

ii pollinate 4.7-0ubuntu1.4 all seed the pseudo random number generator in

ii popularity-contest 1.57ubuntu1 all Vote for your favourite packages automatic

ii powermgmt-base 1.31build1 amd64 Common utils and configs for power managem

ii ppp 2.4.5-5.1ubunt amd64 Point-to-Point Protocol (PPP) - daemon

ii pppconfig 2.3.19ubuntu1 all A text menu based utility for configuring

ii pppoeconf 1.20ubuntu1 all configures PPPoE/ADSL connections

ii procps 1:3.3.9-1ubunt amd64 /proc file system utilities

ii psmisc 22.20-1ubuntu2 amd64 utilities that use the proc file system

ii python 2.7.5-5ubuntu3 amd64 interactive high-level object-oriented lan

ii python-apt 0.9.3.5ubuntu2 amd64 Python interface to libapt-pkg

ii python-apt-common 0.9.3.5ubuntu2 all Python interface to libapt-pkg (locales)

ii python-chardet 2.0.1-2build2 all universal character encoding detector

ii python-cheetah 2.4.4-3.fakesy amd64 text-based template engine and Python code

ii python-configobj 4.7.2+ds-5buil all simple but powerful config file reader and

ii python-debian 0.1.21+nmu2ubu all Python modules to work with Debian-related

ii python-gdbm 2.7.5-1ubuntu1 amd64 GNU dbm database support for Python

ii python-json-pointe 1.0-2build1 all resolve JSON pointers - python 2.x

ii python-jsonpatch 1.3-4 all library to apply JSON patches - python 2.x

ii python-minimal 2.7.5-5ubuntu3 amd64 minimal subset of the Python language (def

ii python-oauth 1.0.1-3build2 all Python library implementing of the OAuth p

ii python-openssl 0.13-2ubuntu6 amd64 Python 2 wrapper around the OpenSSL librar

ii python-pam 0.4.2-13.1ubun amd64 Python interface to the PAM library

ii python-pkg-resourc 3.3-1ubuntu2 all Package Discovery and Resource Access usin

ii python-prettytable 0.7.2-2ubuntu2 all library to represent tabular data in visua

ii python-pycurl 7.19.3-0ubuntu amd64 Python bindings to libcurl

ii python-requests 2.2.1-1ubuntu0 all elegant and simple HTTP library for Python

ii python-serial 2.6-1build1 all pyserial - module encapsulating access for

ii python-six 1.5.2-1ubuntu1 all Python 2 and 3 compatibility library (Pyth

ii python-twisted-bin 13.2.0-1ubuntu amd64 Event-based framework for internet applica

ii python-twisted-cor 13.2.0-1ubuntu all Event-based framework for internet applica

ii python-twisted-nam 13.2.0-1ubuntu all DNS protocol implementation with client an

ii python-twisted-web 13.2.0-1ubuntu all HTTP protocol implementation together with

ii python-urllib3 1.7.1-1ubuntu4 all HTTP library with thread-safe connection p

ii python-xapian 1.2.16-2ubuntu amd64 Xapian search engine interface for Python

ii python-yaml 3.10-4ubuntu0. amd64 YAML parser and emitter for Python

ii python-zope.interf 4.0.5-1ubuntu4 amd64 Interfaces for Python

ii python2.7 2.7.6-8ubuntu0 amd64 Interactive high-level object-oriented lan

ii python2.7-minimal 2.7.6-8ubuntu0 amd64 Minimal subset of the Python language (ver

ii python3 3.4.0-0ubuntu2 amd64 interactive high-level object-oriented lan

ii python3-apport 2.14.1-0ubuntu all Python 3 library for Apport crash report h

ii python3-apt 0.9.3.5ubuntu2 amd64 Python 3 interface to libapt-pkg

ii python3-commandnot 0.3ubuntu12 all Python 3 bindings for command-not-found.

ii python3-dbus 1.2.0-2build2 amd64 simple interprocess messaging system (Pyth

ii python3-distupgrad 1:0.220.8 all manage release upgrades

ii python3-gdbm:amd64 3.4.3-1~14.04. amd64 GNU dbm database support for Python 3.x

ii python3-gi 3.12.0-1ubuntu amd64 Python 3 bindings for gobject-introspectio

ii python3-minimal 3.4.0-0ubuntu2 amd64 minimal subset of the Python language (def

ii python3-newt 0.52.15-2ubunt amd64 NEWT module for Python3

ii python3-problem-re 2.14.1-0ubuntu all Python 3 library to handle problem reports

ii python3-pycurl 7.19.3-0ubuntu amd64 Python 3 bindings to libcurl

ii python3-software-p 0.92.37.7 all manage the repositories that you install s

ii python3-update-man 1:0.196.14 all python 3.x module for update-manager

ii python3.4 3.4.3-1ubuntu1 amd64 Interactive high-level object-oriented lan

ii python3.4-minimal 3.4.3-1ubuntu1 amd64 Minimal subset of the Python language (ver

ii readline-common 6.3-4ubuntu2 all GNU readline and history libraries, common

ii resolvconf 1.69ubuntu1.1 all name server information handler

ii rsync 3.1.0-2ubuntu0 amd64 fast, versatile, remote (and local) file-c

ii rsyslog 7.4.4-1ubuntu2 amd64 reliable system and kernel logging daemon

ii run-one 1.17-0ubuntu1 all run just one instance of a command and its

ii screen 4.1.0~20120320 amd64 terminal multiplexer with VT100/ANSI termi

ii sed 4.2.2-4ubuntu1 amd64 The GNU sed stream editor

ii sensible-utils 0.0.9 all Utilities for sensible alternative selecti

ii sgml-base 1.26+nmu4ubunt all SGML infrastructure and SGML catalog file

ii shared-mime-info 1.2-0ubuntu3 amd64 FreeDesktop.org shared MIME database and s

ii software-propertie 0.92.37.7 all manage the repositories that you install s

ii ssh-import-id 3.21-0ubuntu1 all securely retrieve an SSH public key and in

ii strace 4.8-1ubuntu5 amd64 A system call tracer

ii sudo 1.8.9p5-1ubunt amd64 Provide limited super user privileges to s

ii systemd-services 204-5ubuntu20. amd64 systemd runtime services

ii systemd-shim 6-2bzr1 amd64 shim for systemd

ii sysv-rc 2.88dsf-41ubun all System-V-like runlevel change mechanism

ii sysvinit-utils 2.88dsf-41ubun amd64 System-V-like utilities

ii tar 1.27.1-1 amd64 GNU version of the tar archiving utility

ii tasksel 2.88ubuntu15 all Tool for selecting tasks for installation

ii tasksel-data 2.88ubuntu15 all Official tasks used for installation of De

ii tcpd 7.6.q-25 amd64 Wietse Venema's TCP wrapper utilities

ii tcpdump 4.5.1-2ubuntu1 amd64 command-line network traffic analyzer

ii telnet 0.17-36build2 amd64 The telnet client

ii time 1.7-24 amd64 GNU time program for measuring CPU resourc

ii tmux 1.8-5 amd64 terminal multiplexer

ii tzdata 2015g-0ubuntu0 all time zone and daylight-saving time data

ii ubuntu-keyring 2012.05.19 all GnuPG keys of the Ubuntu archive

ii ubuntu-minimal 1.325 amd64 Minimal core of Ubuntu

ii ubuntu-release-upg 1:0.220.8 all manage release upgrades

ii ubuntu-standard 1.325 amd64 The Ubuntu standard system

ii ucf 3.0027+nmu1 all Update Configuration File(s): preserve use

ii udev 204-5ubuntu20. amd64 /dev/ and hotplug management daemon

ii ufw 0.34~rc-0ubunt all program for managing a Netfilter firewall

ii unattended-upgrade 0.82.1ubuntu2. all automatic installation of security upgrade

ii update-manager-cor 1:0.196.14 all manage release upgrades

ii update-notifier-co 0.154.1ubuntu1 all Files shared between update-notifier and o

ii upstart 1.12.1-0ubuntu amd64 event-based init daemon

ii ureadahead 0.100.0-16 amd64 Read required files in advance

ii usbutils 1:007-2ubuntu1 amd64 Linux USB utilities

ii util-linux 2.20.1-5.1ubun amd64 Miscellaneous system utilities

ii uuid-runtime 2.20.1-5.1ubun amd64 runtime components for the Universally Uni

ii vim 2:7.4.052-1ubu amd64 Vi IMproved - enhanced vi editor

ii vim-common 2:7.4.052-1ubu amd64 Vi IMproved - Common files

ii vim-runtime 2:7.4.052-1ubu all Vi IMproved - Runtime files

ii vim-tiny 2:7.4.052-1ubu amd64 Vi IMproved - enhanced vi editor - compact

ii w3m 0.5.3-15 amd64 WWW browsable pager with excellent tables/

ii wget 1.15-1ubuntu1. amd64 retrieves files from the web

ii whiptail 0.52.15-2ubunt amd64 Displays user-friendly dialog boxes from s

ii xauth 1:1.0.7-1ubunt amd64 X authentication utility

ii xkb-data 2.10.1-1ubuntu all X Keyboard Extension (XKB) configuration d

ii xml-core 0.13+nmu2 all XML infrastructure and XML catalog file su

ii xz-utils 5.1.1alpha+201 amd64 XZ-format compression utilities

ii zerofree 1.0.2-1ubuntu1 amd64 zero free blocks from ext2, ext3 and ext4

ii zlib1g:amd64 1:1.2.8.dfsg-1 amd64 compression library - runtime

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

Issue I encountered:

ubuntu@ip-10-0-1-25:~$ apt-get update

E: Could not open lock file /var/lib/apt/lists/lock - open (13: Permission denied)

E: Unable to lock directory /var/lib/apt/lists/

E: Could not open lock file /var/lib/dpkg/lock - open (13: Permission denied)

E: Unable to lock the administration directory (/var/lib/dpkg/), are you root?

ubuntu@ip-10-0-1-25:~$ apt-get upgrade

E: Could not open lock file /var/lib/dpkg/lock - open (13: Permission denied)

E: Unable to lock the administration directory (/var/lib/dpkg/), are you root?