Name: Tan Han Nguyen

NetID: TXN200004

Week 10 Lab 1

0. Log in

Pre-authentication banner message from server:

| University of Texas at Dallas

| Department of Computer Science

|

| Use of UTD Information Systems is subject to

| the UTD Information Security and Acceptable Use Policy.

|

| Pursuant to Texas Administrative Code 202:

| (1) Unauthorized use is prohibited;

| (2) Usage may be subject to security testing and monitoring;

| (3) Misuse is subject to criminal prosecution; and

| (4) No expectation of privacy except as otherwise provided by applicable

| privacy laws.

|

| ATTENTION: utdnetid != utdnetid@utdallas.edu (UTD != Google!)

|

| \*\*\*\*\* This system will require a connection to the GlobalProtect VPN startin

> g

| on the following dates:

|

| cslinux1.utdallas.edu - June 15, 2020

| cslinux2.utdallas.edu - June 22, 2020

|

| \*\*\*\*\* GlobalProtect VPN Instructions: https://www.utdallas.edu/oit/howto/vpn

> /

|

End of banner message from server

Keyboard-interactive authentication prompts from server:

| Password:

End of keyboard-interactive prompts from server

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│ • MobaXterm Personal Edition v24.2 • │

│ (SSH client, X server and network tools) │

│ │

│ ⮞ SSH session to txn200004@cslinux2.utdallas.edu │

│ • Direct SSH : ✓ │

│ • SSH compression : ✓ │

│ • SSH-browser : ✓ │

│ • X11-forwarding : ✓ (remote display is forwarded through SSH) │

│ │

│ ⮞ For more info, ctrl+click on help or visit our website. │

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Last login: Mon Oct 21 20:23:22 2024 from 10.50.240.134

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csgrads1.utdallas.edu - CentOS Linux 7.9

--All CS Graduate Students should use csgrads1--

cs1.utdallas.edu - CentOS Linux 7.9

cs2.utdallas.edu - CentOS Linux 7.9

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This system is for use by CS students who need a general purpose Linux system

to complete homework assignments. Computationally or resource intensive

simulations will be throttled automatically.

Thank you,

CS Lab Manager

cs-labs@utdallas.edu

/scratch disk space can be used for temporary files.

All files within /scratch will be erased on a regular basis (Sunday 0300).

{cslinux2:~} mkdir week10Lab1; cd week10Lab1

1. Compile and run dot1s.c and dot1m.c

{cslinux2:~/week10Lab1} gcc dot1m.c -o dot1m -std=gnu99 -lpthread

{cslinux2:~/week10Lab1} gcc dot1s.c -o dot1s -std=gnu99 -lpthread

{cslinux2:~/week10Lab1} time ./dot1s

Sum = 1000000.000000

real 0m0.303s

user 0m0.185s

sys 0m0.099s

{cslinux2:~/week10Lab1} time ./dot1m

Thread 0 did 0 to 100000: mysum=100000.000000 global sum=100000.000000

Thread 3 did 300000 to 400000: mysum=100000.000000 global sum=400000.000000

Thread 2 did 200000 to 300000: mysum=100000.000000 global sum=200000.000000

Thread 1 did 100000 to 200000: mysum=100000.000000 global sum=300000.000000

Thread 4 did 400000 to 500000: mysum=100000.000000 global sum=500000.000000

Thread 5 did 500000 to 600000: mysum=100000.000000 global sum=600000.000000

Thread 6 did 600000 to 700000: mysum=100000.000000 global sum=700000.000000

Thread 7 did 700000 to 800000: mysum=100000.000000 global sum=800000.000000

Thread 8 did 800000 to 900000: mysum=100000.000000 global sum=900000.000000

Thread 9 did 900000 to 1000000: mysum=100000.000000 global sum=1000000.000000

Sum = 1000000.000000

real 0m0.212s

user 0m0.097s

sys 0m0.111s

2. Copy each program (dot1s.c and dot1m.c): dot2s.c and dot2m.c

{cslinux2:~/week10Lab1} cp dot1s.c dot2s.c

{cslinux2:~/week10Lab1} cp dot1m.c dot2m.c

{cslinux2:~/week10Lab1} vim dot2s.c

{cslinux2:~/week10Lab1} vim dot2m.c

2.1 – 2.2 Modify dot2s.c and dot2m.c

{cslinux2:~/week10Lab1} cat dot2s.c

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* FILE: dotprod\_serial.c

\* DESCRIPTION:

\* This is a simple serial program which computes the dot product of two

\* vectors. The threaded version can is dotprod\_mutex.c.

\* SOURCE: Vijay Sonnad, IBM

\* LAST REVISED: 01/29/09 Blaise Barney

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#include <stdio.h>

#include <stdlib.h>

/\*

The following structure contains the necessary information

to allow the function "dotprod" to access its input data and

place its output so that it can be accessed later.

\*/

typedef struct

{

double \*a;

double \*b;

double sum;

int veclen;

} DOTDATA;

// int VECLEN = 1000000;

DOTDATA dotstr;

/\*

We will use a function (dotprod) to perform the scalar product.

All input to this routine is obtained through a structure of

type DOTDATA and all output from this function is written into

this same structure. While this is unnecessarily restrictive

for a sequential program, it will turn out to be useful when

we modify the program to compute in parallel.

\*/

void dotprod()

{

/\* Define and use local variables for convenience \*/

int start, end, i;

double mysum, \*x, \*y;

start=0;

end = dotstr.veclen;

x = dotstr.a;

y = dotstr.b;

/\*

Perform the dot product and assign result

to the appropriate variable in the structure.

\*/

mysum = 0;

for (i=start; i<end ; i++)

{

mysum += (x[i] \* y[i]);

}

dotstr.sum = mysum;

}

/\*

The main program initializes data and calls the dotprd() function.

Finally, it prints the result.

\*/

int main (int argc, char \*argv[])

{

system("date; hostname; whoami; ps -eaf; ls \*");

// modify the program to get VECLEN as the argument1

// that is, run the program: ./dots 100000

//

int VECLEN = 1000000;

int i,len;

double \*a, \*b;

/\* Assign storage and initialize values \*/

len = VECLEN;

a = (double\*) malloc (len\*sizeof(double));

b = (double\*) malloc (len\*sizeof(double));

for (i=0; i<len; i++) {

a[i]=1;

b[i]=a[i];

}

dotstr.veclen = len;

dotstr.a = a;

dotstr.b = b;

dotstr.sum=0;

/\* Perform the dotproduct \*/

dotprod ();

/\* Print result and release storage \*/

printf ("Sum = %f \n", dotstr.sum);

free (a);

free (b);

}

{cslinux2:~/week10Lab1} cat dot2m.c

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\* FILE: dotprod\_mutex.c

\* DESCRIPTION:

\* This example program illustrates the use of mutex variables

\* in a threads program. This version was obtained by modifying the

\* serial version of the program (dotprod\_serial.c) which performs a

\* dot product. The main data is made available to all threads through

\* a globally accessible structure. Each thread works on a different

\* part of the data. The main thread waits for all the threads to complete

\* their computations, and then it prints the resulting sum.

\* SOURCE: Vijay Sonnad, IBM

\* LAST REVISED: 01/29/09 Blaise Barney

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#include <pthread.h>

#include <stdio.h>

#include <stdlib.h>

/\*

The following structure contains the necessary information

to allow the function "dotprod" to access its input data and

place its output into the structure. This structure is

unchanged from the sequential version.

\*/

typedef struct

{

double \*a;

double \*b;

double sum;

int veclen;

} DOTDATA;

/\* Define globally accessible variables and a mutex \*/

/\* now moved to main \*/

// #define NUMTHRDS 10

// #define VECLEN 100000

// pthread\_t callThd[NUMTHRDS];

pthread\_mutex\_t mutexsum;

DOTDATA dotstr;

/\*

The function dotprod is activated when the thread is created.

As before, all input to this routine is obtained from a structure

of type DOTDATA and all output from this function is written into

this structure. The benefit of this approach is apparent for the

multi-threaded program: when a thread is created we pass a single

argument to the activated function - typically this argument

is a thread number. All the other information required by the

function is accessed from the globally accessible structure.

\*/

void \*dotprod(void \*arg)

{

/\* Define and use local variables for convenience \*/

int i, start, end, len ;

long offset;

double mysum, \*x, \*y;

offset = (long)arg;

len = dotstr.veclen;

start = offset\*len;

end = start + len;

x = dotstr.a;

y = dotstr.b;

/\*

Perform the dot product and assign result

to the appropriate variale in the structure.

\*/

mysum = 0;

for (i=start; i<end ; i++)

{

mysum += (x[i] \* y[i]);

}

/\*

Lock a mutex prior to updating the value in the shared

variable mutexsum, and unlock it upon updating.

When you call, pass its address of mutexsum.

\*/

// place your code here to lock with pthread\_mutex\_lock

printf("\*\*Thread to lock the mutex\*\*\n");

pthread\_mutex\_lock(&mutexsum);

dotstr.sum += mysum;

printf("Thread %ld did %d to %d: mysum=%f global sum=%f\n",

offset,start,end,mysum,dotstr.sum);

// place your code here to unlock with pthread\_mutex\_unlock

printf("\*\*Thread to unlock the mutex\*\*\n");

pthread\_mutex\_unlock(&mutexsum);

// pthead is now terminated

pthread\_exit((void\*) 0);

}

/\*

The main program creates threads which do all the work and then

print out result upon completion. Before creating the threads,

The input data is created. Since all threads update a shared structure, we

need a mutex for mutual exclusion. The main thread needs to wait for

all threads to complete, it waits for each one of the threads. We specify

a thread attribute value that allow the main thread to join with the

threads it creates. Note also that we free up handles when they are

no longer needed.

\*/

int main (int argc, char \*argv[])

{

system("date; hostname; whoami; ps -eaf; ls \*");

// modify the program to get MUNTHRDS as the argument1

// and VECLEN as argument2

// that is, run the program: ./dotm 10 100000

//

int NUMTHRDS = 10;

int VECLEN = 100000;

pthread\_t callThd[NUMTHRDS];

long i;

double \*a, \*b;

void \*status;

pthread\_attr\_t attr;

/\* Assign storage and initialize values \*/

a = (double\*) malloc (NUMTHRDS\*VECLEN\*sizeof(double));

b = (double\*) malloc (NUMTHRDS\*VECLEN\*sizeof(double));

for (i=0; i<VECLEN\*NUMTHRDS; i++) {

a[i]=1;

b[i]=a[i];

}

dotstr.veclen = VECLEN;

dotstr.a = a;

dotstr.b = b;

dotstr.sum=0;

pthread\_mutex\_init(&mutexsum, NULL);

/\* Create threads to perform the dotproduct \*/

pthread\_attr\_init(&attr);

pthread\_attr\_setdetachstate(&attr, PTHREAD\_CREATE\_JOINABLE);

for(i=0;i<NUMTHRDS;i++)

{

/\* Each thread works on a different set of data.

\* The offset is specified by 'i'. The size of

\* the data for each thread is indicated by VECLEN.

\*/

pthread\_create(&callThd[i], &attr, dotprod, (void \*)i);

}

pthread\_attr\_destroy(&attr);

/\* Wait on the other threads \*/

for(i=0;i<NUMTHRDS;i++) {

pthread\_join(callThd[i], &status);

}

/\* After joining, print out the results and cleanup \*/

printf ("Sum = %f \n", dotstr.sum);

free (a);

free (b);

pthread\_mutex\_destroy(&mutexsum);

pthread\_exit(NULL);

}

2.3 Compile and run dot2s.c and dot2m.c

{cslinux2:~/week10Lab1} gcc dot2s.c -o dot2s -std=gnu99 -lpthread

{cslinux2:~/week10Lab1} gcc dot2m.c -o dot2m -std=gnu99 -lpthread

{cslinux2:~/week10Lab1} ./dot2s

Mon Oct 21 22:25:41 CDT 2024

cslinux2.utdallas.edu

txn200004

UID PID PPID C STIME TTY TIME CMD

root 1 0 0 Sep24 ? 00:17:55 /usr/lib/systemd/systemd --switched-root --system --deserialize 22

root 2 0 0 Sep24 ? 00:00:10 [kthreadd]

root 4 2 0 Sep24 ? 00:00:00 [kworker/0:0H]

root 6 2 0 Sep24 ? 00:10:30 [ksoftirqd/0]

root 7 2 0 Sep24 ? 00:00:50 [migration/0]

root 8 2 0 Sep24 ? 00:00:00 [rcu\_bh]

root 9 2 0 Sep24 ? 03:13:43 [rcu\_sched]

root 10 2 0 Sep24 ? 00:00:00 [lru-add-drain]

root 11 2 0 Sep24 ? 00:02:17 [watchdog/0]

root 12 2 0 Sep24 ? 00:02:00 [watchdog/1]

root 13 2 0 Sep24 ? 00:00:27 [migration/1]

root 14 2 0 Sep24 ? 00:03:24 [ksoftirqd/1]

root 16 2 0 Sep24 ? 00:00:00 [kworker/1:0H]

root 18 2 0 Sep24 ? 00:02:14 [watchdog/2]

root 19 2 0 Sep24 ? 00:01:14 [migration/2]

root 20 2 0 Sep24 ? 00:01:59 [ksoftirqd/2]

root 22 2 0 Sep24 ? 00:00:00 [kworker/2:0H]

root 24 2 0 Sep24 ? 00:02:00 [watchdog/3]

root 25 2 0 Sep24 ? 00:00:38 [migration/3]

root 26 2 0 Sep24 ? 00:00:11 [ksoftirqd/3]

root 28 2 0 Sep24 ? 00:00:00 [kworker/3:0H]

root 29 2 0 Sep24 ? 00:02:15 [watchdog/4]

root 30 2 0 Sep24 ? 00:00:50 [migration/4]

root 31 2 0 Sep24 ? 00:01:24 [ksoftirqd/4]

root 33 2 0 Sep24 ? 00:00:00 [kworker/4:0H]

root 34 2 0 Sep24 ? 00:01:55 [watchdog/5]

root 35 2 0 Sep24 ? 00:00:17 [migration/5]

root 36 2 0 Sep24 ? 00:00:10 [ksoftirqd/5]

root 38 2 0 Sep24 ? 00:00:00 [kworker/5:0H]

root 39 2 0 Sep24 ? 00:02:18 [watchdog/6]

root 40 2 0 Sep24 ? 00:00:42 [migration/6]

root 41 2 0 Sep24 ? 00:01:04 [ksoftirqd/6]

root 44 2 0 Sep24 ? 00:01:57 [watchdog/7]

root 45 2 0 Sep24 ? 00:00:14 [migration/7]

root 46 2 0 Sep24 ? 00:00:41 [ksoftirqd/7]

root 48 2 0 Sep24 ? 00:00:00 [kworker/7:0H]

root 49 2 0 Sep24 ? 00:02:16 [watchdog/8]

root 50 2 0 Sep24 ? 00:00:38 [migration/8]

root 51 2 0 Sep24 ? 00:00:53 [ksoftirqd/8]

root 54 2 0 Sep24 ? 00:01:58 [watchdog/9]

root 55 2 0 Sep24 ? 00:00:15 [migration/9]

root 56 2 0 Sep24 ? 00:00:10 [ksoftirqd/9]

root 58 2 0 Sep24 ? 00:00:00 [kworker/9:0H]

root 59 2 0 Sep24 ? 00:02:16 [watchdog/10]

root 60 2 0 Sep24 ? 00:00:38 [migration/10]

root 61 2 0 Sep24 ? 00:01:00 [ksoftirqd/10]

root 64 2 0 Sep24 ? 00:01:56 [watchdog/11]

root 65 2 0 Sep24 ? 00:00:14 [migration/11]

root 66 2 0 Sep24 ? 00:00:11 [ksoftirqd/11]

root 68 2 0 Sep24 ? 00:00:00 [kworker/11:0H]

root 69 2 0 Sep24 ? 00:02:16 [watchdog/12]

root 70 2 0 Sep24 ? 00:00:35 [migration/12]

root 71 2 0 Sep24 ? 00:00:59 [ksoftirqd/12]

root 74 2 0 Sep24 ? 00:01:57 [watchdog/13]

root 75 2 0 Sep24 ? 00:00:13 [migration/13]

root 76 2 0 Sep24 ? 00:00:10 [ksoftirqd/13]

root 78 2 0 Sep24 ? 00:00:00 [kworker/13:0H]

root 79 2 0 Sep24 ? 00:02:15 [watchdog/14]

root 80 2 0 Sep24 ? 00:00:37 [migration/14]

root 81 2 0 Sep24 ? 00:01:03 [ksoftirqd/14]

root 83 2 0 Sep24 ? 00:02:41 [kworker/14:0H]

root 84 2 0 Sep24 ? 00:01:54 [watchdog/15]

root 85 2 0 Sep24 ? 00:00:12 [migration/15]

root 86 2 0 Sep24 ? 00:00:10 [ksoftirqd/15]

root 88 2 0 Sep24 ? 00:00:00 [kworker/15:0H]

root 91 2 0 Sep24 ? 00:00:00 [kdevtmpfs]

root 92 2 0 Sep24 ? 00:00:00 [netns]

root 93 2 0 Sep24 ? 00:00:26 [khungtaskd]

root 94 2 0 Sep24 ? 00:00:00 [writeback]

root 95 2 0 Sep24 ? 00:00:00 [kintegrityd]

root 96 2 0 Sep24 ? 00:00:00 [bioset]

root 97 2 0 Sep24 ? 00:00:00 [bioset]

root 98 2 0 Sep24 ? 00:00:00 [bioset]

root 99 2 0 Sep24 ? 00:00:00 [kblockd]

root 101 2 0 Sep24 ? 00:00:00 [md]

root 102 2 0 Sep24 ? 00:00:00 [edac-poller]

root 103 2 0 Sep24 ? 00:00:00 [watchdogd]

root 109 2 0 Sep24 ? 00:00:00 [kswapd0]

root 110 2 0 Sep24 ? 00:00:00 [kswapd1]

root 111 2 0 Sep24 ? 00:00:00 [ksmd]

root 112 2 0 Sep24 ? 00:04:06 [khugepaged]

root 113 2 0 Sep24 ? 00:00:00 [crypto]

root 121 2 0 Sep24 ? 00:00:00 [kthrotld]

root 124 2 0 Sep24 ? 00:00:00 [kmpath\_rdacd]

root 125 2 0 Sep24 ? 00:00:00 [kaluad]

root 136 2 0 Sep24 ? 00:00:00 [kpsmoused]

root 137 2 0 Sep24 ? 00:00:00 [ipv6\_addrconf]

root 150 2 0 Sep24 ? 00:00:00 [deferwq]

root 206 2 0 Sep24 ? 00:00:19 [kauditd]

root 340 2 0 Sep24 ? 00:00:00 [scsi\_eh\_0]

root 356 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_0]

root 363 2 0 Sep24 ? 00:00:00 [ata\_sff]

root 367 2 0 Sep24 ? 00:00:00 [ixgbe]

root 370 2 0 Sep24 ? 00:00:00 [scsi\_eh\_1]

root 371 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_1]

root 372 2 0 Sep24 ? 00:00:00 [scsi\_eh\_2]

root 373 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_2]

root 374 2 0 Sep24 ? 00:00:00 [scsi\_eh\_3]

root 375 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_3]

root 376 2 0 Sep24 ? 00:00:00 [scsi\_eh\_4]

root 377 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_4]

root 378 2 0 Sep24 ? 00:00:00 [scsi\_eh\_5]

root 379 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_5]

root 380 2 0 Sep24 ? 00:00:00 [scsi\_eh\_6]

root 381 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_6]

root 387 2 0 Sep24 ? 00:00:00 [poll\_megasas0\_s]

root 390 2 0 Sep24 ? 00:00:00 [ttm\_swap]

root 435 2 0 Sep24 ? 00:11:26 [jbd2/sda3-8]

root 436 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 520 1 0 Sep24 ? 00:07:36 /usr/lib/systemd/systemd-journald

root 531 2 0 Sep24 ? 00:00:00 [rpciod]

root 532 2 0 Sep24 ? 00:00:00 [xprtiod]

root 540 1 0 Sep24 ? 00:00:00 /usr/sbin/lvmetad -f

root 561 1 0 Sep24 ? 00:00:02 /usr/lib/systemd/systemd-udevd

root 668 2 0 Oct09 ? 00:00:00 [kworker/14:2H]

root 1330 2 0 10:46 ? 00:00:00 [kworker/9:0]

root 1582 2 0 10:53 ? 00:00:00 [kworker/2:1]

root 1734 2 0 Sep24 ? 00:00:00 [kvm-irqfd-clean]

root 1942 2 0 Sep24 ? 00:00:00 [jbd2/sda2-8]

root 1943 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1948 2 0 Sep24 ? 00:00:00 [jbd2/sda1-8]

root 1949 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1955 2 0 Sep24 ? 00:04:47 [jbd2/sda5-8]

root 1956 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1978 2 0 Sep24 ? 00:00:08 [kworker/3:1H]

root 1979 2 0 Sep24 ? 00:00:10 [kworker/7:1H]

root 1983 1 0 Sep24 ? 00:01:27 /sbin/auditd

root 1986 1983 0 Sep24 ? 00:02:02 /sbin/audispd

root 1988 1986 0 Sep24 ? 00:00:55 /usr/sbin/sedispatch

libstor+ 2008 1 0 Sep24 ? 00:01:36 /usr/bin/lsmd -d

root 2010 1 0 Sep24 ? 00:01:20 /usr/sbin/sssd -i --logger=files

dbus 2014 1 0 Sep24 ? 00:13:56 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation

chrony 2026 1 0 Sep24 ? 00:00:29 /usr/sbin/chronyd

polkitd 2038 1 0 Sep24 ? 00:04:09 /usr/lib/polkit-1/polkitd --no-debug

root 2053 1 0 Sep24 ? 00:06:09 /opt/dell/srvadmin/sbin/dsm\_sa\_eventmgrd

rtkit 2067 1 0 Sep24 ? 00:05:12 /usr/libexec/rtkit-daemon

root 2069 1 0 Sep24 ? 00:00:41 /usr/sbin/gssproxy -D

root 2071 1 0 Sep24 ? 01:28:12 /usr/sbin/irqbalance --foreground

root 2087 1 0 Sep24 ? 00:34:25 /sbin/rngd -f

root 2098 1 0 Sep24 ? 00:00:00 /opt/dell/srvadmin/sbin/dsm\_om\_connsvcd -run

root 2099 2098 1 Sep24 ? 11:28:48 /opt/dell/srvadmin/sbin/dsm\_om\_connsvcd -run

root 2105 1 0 Sep24 ? 00:00:00 /usr/sbin/acpid

root 2131 1 0 Sep24 ? 00:00:00 /usr/sbin/rpc.gssd

root 2135 1 0 Sep24 ? 00:23:49 /bin/bash /usr/sbin/ksmtuned

root 2211 1 0 Sep24 ? 04:31:59 /opt/dell/srvadmin/sbin/dsm\_sa\_datamgrd

root 2230 2010 0 Sep24 ? 05:33:19 /usr/libexec/sssd/sssd\_be --domain ipa.utdallas.edu --uid 0 --gid 0 --logger=files

root 2439 2010 0 Sep24 ? 01:10:10 /usr/libexec/sssd/sssd\_nss --uid 0 --gid 0 --logger=files

root 2440 2010 0 Sep24 ? 00:15:22 /usr/libexec/sssd/sssd\_pam --uid 0 --gid 0 --logger=files

root 2442 2010 0 Sep24 ? 00:04:45 /usr/libexec/sssd/sssd\_pac --uid 0 --gid 0 --logger=files

root 2443 2010 0 Sep24 ? 00:03:38 /usr/libexec/sssd/sssd\_sudo --uid 0 --gid 0 --logger=files

root 2444 2010 0 Sep24 ? 00:07:38 /usr/libexec/sssd/sssd\_ssh --uid 0 --gid 0 --logger=files

root 2445 2010 0 Sep24 ? 00:04:00 /usr/libexec/sssd/sssd\_autofs --uid 0 --gid 0 --logger=files

root 2465 1 0 Sep24 ? 00:05:28 /usr/lib/systemd/systemd-logind

root 2466 1 0 Sep24 ? 00:08:33 /usr/libexec/accounts-daemon

root 2518 2 0 Sep24 ? 00:00:08 [kworker/1:1H]

root 2566 1 0 Sep24 ? 00:56:41 /usr/sbin/lldpad -t

root 2567 1 0 Sep24 ? 00:38:06 /usr/bin/python2 -Es /usr/sbin/tuned -l -P

root 2569 1 0 Sep24 ? 00:00:33 /usr/sbin/sshd -D

root 2572 1 0 Sep24 ? 00:00:00 /usr/sbin/cupsd -f

root 2573 1 0 Sep24 ? 00:00:00 /usr/sbin/xinetd -stayalive -pidfile /var/run/xinetd.pid

telegraf 2588 1 8 Sep24 ? 2-08:54:49 /usr/bin/telegraf -config /etc/telegraf/telegraf.conf -config-directory /etc/telegraf/telegraf.d

root 2594 1 0 Sep24 ? 00:21:32 /usr/sbin/rsyslogd -n

root 2595 2 0 Sep24 ? 00:00:09 [kworker/11:1H]

root 2613 1 0 Sep24 ? 00:01:12 /usr/sbin/lightdm

root 2615 1 0 Sep24 ? 00:01:30 /usr/sbin/crond -n

root 2618 1 0 Sep24 ? 00:00:00 /usr/sbin/atd -f

root 2649 2613 0 Sep24 tty1 00:00:00 /usr/bin/X -background none :0 -seat seat0 -auth /var/run/lightdm/root/:0 -nolisten tcp vt1 -novtswitch -background none

root 2662 2 0 Sep24 ? 00:00:10 [kworker/15:1H]

root 2663 2 0 Sep24 ? 00:00:09 [kworker/5:1H]

root 2664 2 0 Sep24 ? 00:00:10 [kworker/9:1H]

root 2665 2 0 Sep24 ? 00:00:10 [kworker/13:1H]

root 2719 1 0 Sep24 ? 00:41:58 /opt/dell/srvadmin/iSM/sbin/dsm\_ism\_srvmgrd

root 2893 2613 0 Sep24 ? 00:00:00 lightdm --session-child 18 21

lightdm 2972 2893 0 Sep24 ? 00:36:35 /usr/sbin/lightdm-gtk-greeter

root 2982 2211 0 Sep24 ? 00:00:00 /opt/dell/srvadmin/sbin/dsm\_sa\_datamgrd

telegraf 3011 1 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --fork --print-pid 4 --print-address 6 --session

lightdm 3012 1 0 Sep24 ? 00:00:00 /usr/libexec/at-spi-bus-launcher --launch-immediately

lightdm 3018 1 0 Sep24 ? 00:00:00 dbus-launch --autolaunch=8d19eba0aff440b1a473f9adbfe0aead --binary-syntax --close-stderr

lightdm 3019 1 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --fork --print-pid 5 --print-address 7 --session

lightdm 3022 3012 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3

root 3036 2613 0 Sep24 ? 00:00:00 lightdm --session-child 14 21

root 3070 2 0 12:05 ? 00:00:00 [kworker/7:2]

colord 3110 1 0 Sep24 ? 00:00:00 /usr/libexec/colord

root 3246 2569 0 Oct19 ? 00:00:00 sshd: sxb027100 [priv]

sxb0271+ 3253 3246 0 Oct19 ? 00:16:54 sshd: sxb027100@pts/1

sxb0271+ 3254 3253 0 Oct19 pts/1 00:00:01 -bash

root 3305 1 6 Sep24 ? 1-19:19:04 /usr/sbin/snmpd -LS0-6d -f

sxb0271+ 3341 3254 0 Oct19 pts/1 00:12:40 ssh enigma

sxb0271+ 3342 3341 0 Oct19 pts/1 00:07:15 /usr/bin/sss\_ssh\_knownhostsproxy -p 22 enigma

root 3686 2569 0 12:49 ? 00:00:00 sshd: sxb027100 [priv]

sxb0271+ 3704 3686 0 12:50 ? 00:01:18 sshd: sxb027100@pts/2

sxb0271+ 3705 3704 0 12:50 pts/2 00:00:00 -bash

rpc 3833 1 0 Sep24 ? 00:01:07 /sbin/rpcbind -w

rpcuser 3839 1 0 Sep24 ? 00:00:00 /usr/sbin/rpc.statd

root 4010 2 0 Sep24 ? 00:00:00 [nfsiod]

root 4023 2 0 Sep24 ? 00:00:00 [nfsv4.1-svc]

root 4888 1 0 Sep24 ? 00:11:57 /usr/libexec/packagekitd

root 7052 2 0 Oct19 ? 00:00:27 [kworker/6:2]

root 8159 2 0 17:50 ? 00:00:00 [kworker/11:1]

sxb0271+ 8482 3705 0 18:08 pts/2 00:00:56 ssh enigma

sxb0271+ 8483 8482 0 18:08 pts/2 00:00:32 /usr/bin/sss\_ssh\_knownhostsproxy -p 22 enigma

root 8785 2 0 18:30 ? 00:00:00 [kworker/3:1]

root 11141 2569 0 20:23 ? 00:00:00 sshd: txn200004 [priv]

txn2000+ 11233 11141 0 20:23 ? 00:00:00 sshd: txn200004@notty

txn2000+ 11234 11233 0 20:23 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 11504 2569 0 20:35 ? 00:00:00 sshd: sxj210111 [priv]

sxj2101+ 11518 11504 0 20:36 ? 00:00:04 sshd: sxj210111@pts/6

root 11519 2569 0 20:36 ? 00:00:00 sshd: sxj210111 [priv]

sxj2101+ 11527 11519 0 20:36 ? 00:00:00 sshd: sxj210111@notty

sxj2101+ 11528 11527 0 20:36 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 11533 2 0 20:36 ? 00:00:00 [kworker/3:2]

root 11534 2 0 20:36 ? 00:00:00 [kworker/13:2]

sxj2101+ 11539 11518 0 20:36 pts/6 00:00:01 -bash

root 11671 2 0 20:39 ? 00:00:01 [kworker/2:2]

root 12234 2 0 21:03 ? 00:00:01 [kworker/10:1]

root 12235 2 0 21:03 ? 00:00:00 [kworker/12:2]

root 12273 2 0 21:05 ? 00:00:00 [kworker/5:0]

root 12312 2 0 21:06 ? 00:00:00 [kworker/u97:2]

root 12544 2 0 21:21 ? 00:00:00 [kworker/u97:1]

root 12559 2569 0 21:22 ? 00:00:00 sshd: dxp210050 [priv]

root 12578 2569 0 21:22 ? 00:00:00 sshd: dxp210050 [priv]

dxp2100+ 12580 12559 0 21:22 ? 00:00:07 sshd: dxp210050@pts/7

root 12583 2 0 21:22 ? 00:00:00 [kworker/12:1]

dxp2100+ 12584 12580 0 21:22 pts/7 00:00:02 -bash

dxp2100+ 12624 12578 0 21:22 ? 00:00:00 sshd: dxp210050@notty

dxp2100+ 12644 12624 0 21:22 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 12699 2 0 21:23 ? 00:00:00 [kworker/6:0]

root 12709 2 0 21:24 ? 00:00:01 [kworker/5:2]

root 12773 2 0 21:28 ? 00:00:00 [kworker/u98:2]

root 13300 2 0 22:00 ? 00:00:00 [kworker/u96:2]

root 13492 2 0 22:09 ? 00:00:00 [kworker/0:1]

root 13514 2 0 22:10 ? 00:00:00 [kworker/15:1]

root 13534 2 0 22:11 ? 00:00:00 [kworker/u98:1]

root 13630 2 0 22:17 ? 00:00:00 [kworker/u96:0]

root 13639 2569 0 22:18 ? 00:00:00 sshd: txn200004 [priv]

root 13645 2569 0 22:18 ? 00:00:00 sshd: txn200004 [priv]

txn2000+ 13647 13639 0 22:18 ? 00:00:01 sshd: txn200004@pts/0

txn2000+ 13648 13647 0 22:18 pts/0 00:00:01 -bash

root 13672 2 0 22:18 ? 00:00:00 [kworker/0:0]

txn2000+ 13741 13645 0 22:18 ? 00:00:00 sshd: txn200004@notty

txn2000+ 13742 13741 0 22:18 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 13789 2569 0 22:20 ? 00:00:00 sshd: bxs220001 [priv]

root 13795 2569 0 22:20 ? 00:00:00 sshd: bxs220001 [priv]

bxs2200+ 13797 13789 0 22:20 ? 00:00:00 sshd: bxs220001@pts/3

bxs2200+ 13798 13797 0 22:20 pts/3 00:00:00 -bash

bxs2200+ 13838 13795 0 22:20 ? 00:00:00 sshd: bxs220001@notty

bxs2200+ 13852 13838 0 22:20 ? 00:00:00 /usr/libexec/openssh/sftp-server

bxs2200+ 13894 13798 0 22:20 pts/3 00:00:02 vim q1.sh

root 13916 2 0 22:21 ? 00:00:00 [kworker/8:0]

root 13923 2 0 22:21 ? 00:00:00 [kworker/15:2]

root 13969 2 0 22:23 ? 00:00:00 [kworker/u96:1]

root 13995 2 0 22:23 ? 00:00:00 [kworker/u98:0]

root 13996 2 0 22:23 ? 00:00:00 [kworker/u97:0]

root 13997 2 0 22:23 ? 00:00:00 [kworker/u97:3]

root 14096 2135 0 22:25 ? 00:00:00 sleep 60

txn2000+ 14113 13648 0 22:25 pts/0 00:00:00 ./dot2s

txn2000+ 14114 14113 0 22:25 pts/0 00:00:00 sh -c date; hostname; whoami; ps -eaf; ls \*

txn2000+ 14118 14114 0 22:25 pts/0 00:00:00 ps -eaf

root 14555 2 0 Sep24 ? 00:00:00 [lockd]

root 23303 2 0 Sep25 ? 00:00:01 [kworker/8:2H]

root 23322 2 0 Sep25 ? 00:00:02 [kworker/12:2H]

root 23323 2 0 Sep25 ? 00:04:36 [kworker/10:2H]

root 23361 2 0 Sep25 ? 00:00:00 [kworker/6:2H]

root 23378 2 0 Sep25 ? 00:06:14 [kworker/2:2H]

root 23448 2 0 Sep25 ? 00:00:00 [kworker/10:0H]

root 23534 2 0 Sep25 ? 00:05:10 [kworker/4:1H]

root 23557 2 0 Sep25 ? 00:05:31 [kworker/0:1H]

root 23578 2 0 Sep25 ? 00:04:15 [kworker/8:0H]

root 28661 2 0 Oct03 ? 00:02:46 [kworker/12:0H]

root 29721 1 0 Sep24 ? 00:43:07 /usr/sbin/automount --systemd-service --dont-check-daemon

root 30479 2 0 Oct12 ? 00:00:00 [nfsv4.0-svc]

root 34207 2 0 Oct20 ? 00:00:12 [kworker/10:0]

root 35991 2 0 Oct20 ? 00:00:03 [kworker/11:2]

root 37299 2 0 Oct20 ? 00:00:03 [kworker/9:1]

root 37405 2 0 Oct20 ? 00:00:08 [kworker/1:2]

root 37518 2 0 Oct20 ? 00:00:02 [kworker/15:0]

root 38722 2 0 Oct19 ? 00:00:25 [kworker/14:0]

root 39858 2 0 01:24 ? 00:00:05 [kworker/7:1]

root 42598 2 0 03:27 ? 00:00:11 [kworker/4:1]

root 42854 2 0 03:28 ? 00:00:12 [kworker/8:2]

root 43854 2 0 03:37 ? 00:00:00 [kworker/8:1]

root 43913 2 0 03:39 ? 00:00:00 [kworker/14:1]

root 44389 2 0 Oct01 ? 00:03:01 [kworker/6:1H]

root 44809 2 0 04:20 ? 00:00:00 [kworker/4:2]

root 45007 2 0 Oct19 ? 00:00:07 [kworker/13:0]

root 46146 2 0 Oct19 ? 00:00:00 [kworker/1:0]

dot1m dot1m.c dot1s dot1s.c dot2m dot2m.c dot2s dot2s.c

Sum = 1000000.000000

{cslinux2:~/week10Lab1} ./dot2m

Mon Oct 21 22:25:47 CDT 2024

cslinux2.utdallas.edu

txn200004

UID PID PPID C STIME TTY TIME CMD

root 1 0 0 Sep24 ? 00:17:55 /usr/lib/systemd/systemd --switched-root --system --deserialize 22

root 2 0 0 Sep24 ? 00:00:10 [kthreadd]

root 4 2 0 Sep24 ? 00:00:00 [kworker/0:0H]

root 6 2 0 Sep24 ? 00:10:30 [ksoftirqd/0]

root 7 2 0 Sep24 ? 00:00:50 [migration/0]

root 8 2 0 Sep24 ? 00:00:00 [rcu\_bh]

root 9 2 0 Sep24 ? 03:13:43 [rcu\_sched]

root 10 2 0 Sep24 ? 00:00:00 [lru-add-drain]

root 11 2 0 Sep24 ? 00:02:17 [watchdog/0]

root 12 2 0 Sep24 ? 00:02:00 [watchdog/1]

root 13 2 0 Sep24 ? 00:00:27 [migration/1]

root 14 2 0 Sep24 ? 00:03:24 [ksoftirqd/1]

root 16 2 0 Sep24 ? 00:00:00 [kworker/1:0H]

root 18 2 0 Sep24 ? 00:02:14 [watchdog/2]

root 19 2 0 Sep24 ? 00:01:14 [migration/2]

root 20 2 0 Sep24 ? 00:01:59 [ksoftirqd/2]

root 22 2 0 Sep24 ? 00:00:00 [kworker/2:0H]

root 24 2 0 Sep24 ? 00:02:00 [watchdog/3]

root 25 2 0 Sep24 ? 00:00:38 [migration/3]

root 26 2 0 Sep24 ? 00:00:11 [ksoftirqd/3]

root 28 2 0 Sep24 ? 00:00:00 [kworker/3:0H]

root 29 2 0 Sep24 ? 00:02:15 [watchdog/4]

root 30 2 0 Sep24 ? 00:00:50 [migration/4]

root 31 2 0 Sep24 ? 00:01:24 [ksoftirqd/4]

root 33 2 0 Sep24 ? 00:00:00 [kworker/4:0H]

root 34 2 0 Sep24 ? 00:01:55 [watchdog/5]

root 35 2 0 Sep24 ? 00:00:17 [migration/5]

root 36 2 0 Sep24 ? 00:00:10 [ksoftirqd/5]

root 38 2 0 Sep24 ? 00:00:00 [kworker/5:0H]

root 39 2 0 Sep24 ? 00:02:18 [watchdog/6]

root 40 2 0 Sep24 ? 00:00:42 [migration/6]

root 41 2 0 Sep24 ? 00:01:04 [ksoftirqd/6]

root 44 2 0 Sep24 ? 00:01:57 [watchdog/7]

root 45 2 0 Sep24 ? 00:00:14 [migration/7]

root 46 2 0 Sep24 ? 00:00:41 [ksoftirqd/7]

root 48 2 0 Sep24 ? 00:00:00 [kworker/7:0H]

root 49 2 0 Sep24 ? 00:02:16 [watchdog/8]

root 50 2 0 Sep24 ? 00:00:38 [migration/8]

root 51 2 0 Sep24 ? 00:00:53 [ksoftirqd/8]

root 54 2 0 Sep24 ? 00:01:58 [watchdog/9]

root 55 2 0 Sep24 ? 00:00:15 [migration/9]

root 56 2 0 Sep24 ? 00:00:10 [ksoftirqd/9]

root 58 2 0 Sep24 ? 00:00:00 [kworker/9:0H]

root 59 2 0 Sep24 ? 00:02:16 [watchdog/10]

root 60 2 0 Sep24 ? 00:00:38 [migration/10]

root 61 2 0 Sep24 ? 00:01:00 [ksoftirqd/10]

root 64 2 0 Sep24 ? 00:01:56 [watchdog/11]

root 65 2 0 Sep24 ? 00:00:14 [migration/11]

root 66 2 0 Sep24 ? 00:00:11 [ksoftirqd/11]

root 68 2 0 Sep24 ? 00:00:00 [kworker/11:0H]

root 69 2 0 Sep24 ? 00:02:16 [watchdog/12]

root 70 2 0 Sep24 ? 00:00:35 [migration/12]

root 71 2 0 Sep24 ? 00:00:59 [ksoftirqd/12]

root 74 2 0 Sep24 ? 00:01:57 [watchdog/13]

root 75 2 0 Sep24 ? 00:00:13 [migration/13]

root 76 2 0 Sep24 ? 00:00:10 [ksoftirqd/13]

root 78 2 0 Sep24 ? 00:00:00 [kworker/13:0H]

root 79 2 0 Sep24 ? 00:02:15 [watchdog/14]

root 80 2 0 Sep24 ? 00:00:37 [migration/14]

root 81 2 0 Sep24 ? 00:01:03 [ksoftirqd/14]

root 83 2 0 Sep24 ? 00:02:41 [kworker/14:0H]

root 84 2 0 Sep24 ? 00:01:54 [watchdog/15]

root 85 2 0 Sep24 ? 00:00:12 [migration/15]

root 86 2 0 Sep24 ? 00:00:10 [ksoftirqd/15]

root 88 2 0 Sep24 ? 00:00:00 [kworker/15:0H]

root 91 2 0 Sep24 ? 00:00:00 [kdevtmpfs]

root 92 2 0 Sep24 ? 00:00:00 [netns]

root 93 2 0 Sep24 ? 00:00:26 [khungtaskd]

root 94 2 0 Sep24 ? 00:00:00 [writeback]

root 95 2 0 Sep24 ? 00:00:00 [kintegrityd]

root 96 2 0 Sep24 ? 00:00:00 [bioset]

root 97 2 0 Sep24 ? 00:00:00 [bioset]

root 98 2 0 Sep24 ? 00:00:00 [bioset]

root 99 2 0 Sep24 ? 00:00:00 [kblockd]

root 101 2 0 Sep24 ? 00:00:00 [md]

root 102 2 0 Sep24 ? 00:00:00 [edac-poller]

root 103 2 0 Sep24 ? 00:00:00 [watchdogd]

root 109 2 0 Sep24 ? 00:00:00 [kswapd0]

root 110 2 0 Sep24 ? 00:00:00 [kswapd1]

root 111 2 0 Sep24 ? 00:00:00 [ksmd]

root 112 2 0 Sep24 ? 00:04:06 [khugepaged]

root 113 2 0 Sep24 ? 00:00:00 [crypto]

root 121 2 0 Sep24 ? 00:00:00 [kthrotld]

root 124 2 0 Sep24 ? 00:00:00 [kmpath\_rdacd]

root 125 2 0 Sep24 ? 00:00:00 [kaluad]

root 136 2 0 Sep24 ? 00:00:00 [kpsmoused]

root 137 2 0 Sep24 ? 00:00:00 [ipv6\_addrconf]

root 150 2 0 Sep24 ? 00:00:00 [deferwq]

root 206 2 0 Sep24 ? 00:00:19 [kauditd]

root 340 2 0 Sep24 ? 00:00:00 [scsi\_eh\_0]

root 356 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_0]

root 363 2 0 Sep24 ? 00:00:00 [ata\_sff]

root 367 2 0 Sep24 ? 00:00:00 [ixgbe]

root 370 2 0 Sep24 ? 00:00:00 [scsi\_eh\_1]

root 371 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_1]

root 372 2 0 Sep24 ? 00:00:00 [scsi\_eh\_2]

root 373 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_2]

root 374 2 0 Sep24 ? 00:00:00 [scsi\_eh\_3]

root 375 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_3]

root 376 2 0 Sep24 ? 00:00:00 [scsi\_eh\_4]

root 377 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_4]

root 378 2 0 Sep24 ? 00:00:00 [scsi\_eh\_5]

root 379 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_5]

root 380 2 0 Sep24 ? 00:00:00 [scsi\_eh\_6]

root 381 2 0 Sep24 ? 00:00:00 [scsi\_tmf\_6]

root 387 2 0 Sep24 ? 00:00:00 [poll\_megasas0\_s]

root 390 2 0 Sep24 ? 00:00:00 [ttm\_swap]

root 435 2 0 Sep24 ? 00:11:26 [jbd2/sda3-8]

root 436 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 520 1 0 Sep24 ? 00:07:36 /usr/lib/systemd/systemd-journald

root 531 2 0 Sep24 ? 00:00:00 [rpciod]

root 532 2 0 Sep24 ? 00:00:00 [xprtiod]

root 540 1 0 Sep24 ? 00:00:00 /usr/sbin/lvmetad -f

root 561 1 0 Sep24 ? 00:00:02 /usr/lib/systemd/systemd-udevd

root 668 2 0 Oct09 ? 00:00:00 [kworker/14:2H]

root 1330 2 0 10:46 ? 00:00:00 [kworker/9:0]

root 1582 2 0 10:53 ? 00:00:00 [kworker/2:1]

root 1734 2 0 Sep24 ? 00:00:00 [kvm-irqfd-clean]

root 1942 2 0 Sep24 ? 00:00:00 [jbd2/sda2-8]

root 1943 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1948 2 0 Sep24 ? 00:00:00 [jbd2/sda1-8]

root 1949 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1955 2 0 Sep24 ? 00:04:47 [jbd2/sda5-8]

root 1956 2 0 Sep24 ? 00:00:00 [ext4-rsv-conver]

root 1978 2 0 Sep24 ? 00:00:08 [kworker/3:1H]

root 1979 2 0 Sep24 ? 00:00:10 [kworker/7:1H]

root 1983 1 0 Sep24 ? 00:01:27 /sbin/auditd

root 1986 1983 0 Sep24 ? 00:02:02 /sbin/audispd

root 1988 1986 0 Sep24 ? 00:00:55 /usr/sbin/sedispatch

libstor+ 2008 1 0 Sep24 ? 00:01:36 /usr/bin/lsmd -d

root 2010 1 0 Sep24 ? 00:01:20 /usr/sbin/sssd -i --logger=files

dbus 2014 1 0 Sep24 ? 00:13:56 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation

chrony 2026 1 0 Sep24 ? 00:00:29 /usr/sbin/chronyd

polkitd 2038 1 0 Sep24 ? 00:04:09 /usr/lib/polkit-1/polkitd --no-debug

root 2053 1 0 Sep24 ? 00:06:09 /opt/dell/srvadmin/sbin/dsm\_sa\_eventmgrd

rtkit 2067 1 0 Sep24 ? 00:05:12 /usr/libexec/rtkit-daemon

root 2069 1 0 Sep24 ? 00:00:41 /usr/sbin/gssproxy -D

root 2071 1 0 Sep24 ? 01:28:12 /usr/sbin/irqbalance --foreground

root 2087 1 0 Sep24 ? 00:34:25 /sbin/rngd -f

root 2098 1 0 Sep24 ? 00:00:00 /opt/dell/srvadmin/sbin/dsm\_om\_connsvcd -run

root 2099 2098 1 Sep24 ? 11:28:48 /opt/dell/srvadmin/sbin/dsm\_om\_connsvcd -run

root 2105 1 0 Sep24 ? 00:00:00 /usr/sbin/acpid

root 2131 1 0 Sep24 ? 00:00:00 /usr/sbin/rpc.gssd

root 2135 1 0 Sep24 ? 00:23:49 /bin/bash /usr/sbin/ksmtuned

root 2211 1 0 Sep24 ? 04:31:59 /opt/dell/srvadmin/sbin/dsm\_sa\_datamgrd

root 2230 2010 0 Sep24 ? 05:33:19 /usr/libexec/sssd/sssd\_be --domain ipa.utdallas.edu --uid 0 --gid 0 --logger=files

root 2439 2010 0 Sep24 ? 01:10:10 /usr/libexec/sssd/sssd\_nss --uid 0 --gid 0 --logger=files

root 2440 2010 0 Sep24 ? 00:15:22 /usr/libexec/sssd/sssd\_pam --uid 0 --gid 0 --logger=files

root 2442 2010 0 Sep24 ? 00:04:45 /usr/libexec/sssd/sssd\_pac --uid 0 --gid 0 --logger=files

root 2443 2010 0 Sep24 ? 00:03:38 /usr/libexec/sssd/sssd\_sudo --uid 0 --gid 0 --logger=files

root 2444 2010 0 Sep24 ? 00:07:38 /usr/libexec/sssd/sssd\_ssh --uid 0 --gid 0 --logger=files

root 2445 2010 0 Sep24 ? 00:04:00 /usr/libexec/sssd/sssd\_autofs --uid 0 --gid 0 --logger=files

root 2465 1 0 Sep24 ? 00:05:28 /usr/lib/systemd/systemd-logind

root 2466 1 0 Sep24 ? 00:08:33 /usr/libexec/accounts-daemon

root 2518 2 0 Sep24 ? 00:00:08 [kworker/1:1H]

root 2566 1 0 Sep24 ? 00:56:41 /usr/sbin/lldpad -t

root 2567 1 0 Sep24 ? 00:38:06 /usr/bin/python2 -Es /usr/sbin/tuned -l -P

root 2569 1 0 Sep24 ? 00:00:33 /usr/sbin/sshd -D

root 2572 1 0 Sep24 ? 00:00:00 /usr/sbin/cupsd -f

root 2573 1 0 Sep24 ? 00:00:00 /usr/sbin/xinetd -stayalive -pidfile /var/run/xinetd.pid

telegraf 2588 1 8 Sep24 ? 2-08:54:49 /usr/bin/telegraf -config /etc/telegraf/telegraf.conf -config-directory /etc/telegraf/telegraf.d

root 2594 1 0 Sep24 ? 00:21:32 /usr/sbin/rsyslogd -n

root 2595 2 0 Sep24 ? 00:00:09 [kworker/11:1H]

root 2613 1 0 Sep24 ? 00:01:12 /usr/sbin/lightdm

root 2615 1 0 Sep24 ? 00:01:30 /usr/sbin/crond -n

root 2618 1 0 Sep24 ? 00:00:00 /usr/sbin/atd -f

root 2649 2613 0 Sep24 tty1 00:00:00 /usr/bin/X -background none :0 -seat seat0 -auth /var/run/lightdm/root/:0 -nolisten tcp vt1 -novtswitch -background none

root 2662 2 0 Sep24 ? 00:00:10 [kworker/15:1H]

root 2663 2 0 Sep24 ? 00:00:09 [kworker/5:1H]

root 2664 2 0 Sep24 ? 00:00:10 [kworker/9:1H]

root 2665 2 0 Sep24 ? 00:00:10 [kworker/13:1H]

root 2719 1 0 Sep24 ? 00:41:58 /opt/dell/srvadmin/iSM/sbin/dsm\_ism\_srvmgrd

root 2893 2613 0 Sep24 ? 00:00:00 lightdm --session-child 18 21

lightdm 2972 2893 0 Sep24 ? 00:36:35 /usr/sbin/lightdm-gtk-greeter

root 2982 2211 0 Sep24 ? 00:00:00 /opt/dell/srvadmin/sbin/dsm\_sa\_datamgrd

telegraf 3011 1 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --fork --print-pid 4 --print-address 6 --session

lightdm 3012 1 0 Sep24 ? 00:00:00 /usr/libexec/at-spi-bus-launcher --launch-immediately

lightdm 3018 1 0 Sep24 ? 00:00:00 dbus-launch --autolaunch=8d19eba0aff440b1a473f9adbfe0aead --binary-syntax --close-stderr

lightdm 3019 1 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --fork --print-pid 5 --print-address 7 --session

lightdm 3022 3012 0 Sep24 ? 00:00:00 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3

root 3036 2613 0 Sep24 ? 00:00:00 lightdm --session-child 14 21

root 3070 2 0 12:05 ? 00:00:00 [kworker/7:2]

colord 3110 1 0 Sep24 ? 00:00:00 /usr/libexec/colord

root 3246 2569 0 Oct19 ? 00:00:00 sshd: sxb027100 [priv]

sxb0271+ 3253 3246 0 Oct19 ? 00:16:54 sshd: sxb027100@pts/1

sxb0271+ 3254 3253 0 Oct19 pts/1 00:00:01 -bash

root 3305 1 6 Sep24 ? 1-19:19:05 /usr/sbin/snmpd -LS0-6d -f

sxb0271+ 3341 3254 0 Oct19 pts/1 00:12:40 ssh enigma

sxb0271+ 3342 3341 0 Oct19 pts/1 00:07:15 /usr/bin/sss\_ssh\_knownhostsproxy -p 22 enigma

root 3686 2569 0 12:49 ? 00:00:00 sshd: sxb027100 [priv]

sxb0271+ 3704 3686 0 12:50 ? 00:01:18 sshd: sxb027100@pts/2

sxb0271+ 3705 3704 0 12:50 pts/2 00:00:00 -bash

rpc 3833 1 0 Sep24 ? 00:01:07 /sbin/rpcbind -w

rpcuser 3839 1 0 Sep24 ? 00:00:00 /usr/sbin/rpc.statd

root 4010 2 0 Sep24 ? 00:00:00 [nfsiod]

root 4023 2 0 Sep24 ? 00:00:00 [nfsv4.1-svc]

root 4888 1 0 Sep24 ? 00:11:57 /usr/libexec/packagekitd

root 7052 2 0 Oct19 ? 00:00:27 [kworker/6:2]

root 8159 2 0 17:50 ? 00:00:00 [kworker/11:1]

sxb0271+ 8482 3705 0 18:08 pts/2 00:00:56 ssh enigma

sxb0271+ 8483 8482 0 18:08 pts/2 00:00:32 /usr/bin/sss\_ssh\_knownhostsproxy -p 22 enigma

root 8785 2 0 18:30 ? 00:00:00 [kworker/3:1]

root 11141 2569 0 20:23 ? 00:00:00 sshd: txn200004 [priv]

txn2000+ 11233 11141 0 20:23 ? 00:00:00 sshd: txn200004@notty

txn2000+ 11234 11233 0 20:23 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 11504 2569 0 20:35 ? 00:00:00 sshd: sxj210111 [priv]

sxj2101+ 11518 11504 0 20:36 ? 00:00:04 sshd: sxj210111@pts/6

root 11519 2569 0 20:36 ? 00:00:00 sshd: sxj210111 [priv]

sxj2101+ 11527 11519 0 20:36 ? 00:00:00 sshd: sxj210111@notty

sxj2101+ 11528 11527 0 20:36 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 11533 2 0 20:36 ? 00:00:00 [kworker/3:2]

root 11534 2 0 20:36 ? 00:00:00 [kworker/13:2]

sxj2101+ 11539 11518 0 20:36 pts/6 00:00:01 -bash

root 11671 2 0 20:39 ? 00:00:01 [kworker/2:2]

root 12234 2 0 21:03 ? 00:00:01 [kworker/10:1]

root 12235 2 0 21:03 ? 00:00:00 [kworker/12:2]

root 12273 2 0 21:05 ? 00:00:00 [kworker/5:0]

root 12312 2 0 21:06 ? 00:00:00 [kworker/u97:2]

root 12544 2 0 21:21 ? 00:00:00 [kworker/u97:1]

root 12559 2569 0 21:22 ? 00:00:00 sshd: dxp210050 [priv]

root 12578 2569 0 21:22 ? 00:00:00 sshd: dxp210050 [priv]

dxp2100+ 12580 12559 0 21:22 ? 00:00:07 sshd: dxp210050@pts/7

root 12583 2 0 21:22 ? 00:00:00 [kworker/12:1]

dxp2100+ 12584 12580 0 21:22 pts/7 00:00:02 -bash

dxp2100+ 12624 12578 0 21:22 ? 00:00:00 sshd: dxp210050@notty

dxp2100+ 12644 12624 0 21:22 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 12699 2 0 21:23 ? 00:00:00 [kworker/6:0]

root 12709 2 0 21:24 ? 00:00:01 [kworker/5:2]

root 12773 2 0 21:28 ? 00:00:00 [kworker/u98:2]

root 13300 2 0 22:00 ? 00:00:00 [kworker/u96:2]

root 13492 2 0 22:09 ? 00:00:00 [kworker/0:1]

root 13514 2 0 22:10 ? 00:00:00 [kworker/15:1]

root 13534 2 0 22:11 ? 00:00:00 [kworker/u98:1]

root 13630 2 0 22:17 ? 00:00:00 [kworker/u96:0]

root 13639 2569 0 22:18 ? 00:00:00 sshd: txn200004 [priv]

root 13645 2569 0 22:18 ? 00:00:00 sshd: txn200004 [priv]

txn2000+ 13647 13639 0 22:18 ? 00:00:01 sshd: txn200004@pts/0

txn2000+ 13648 13647 0 22:18 pts/0 00:00:01 -bash

root 13672 2 0 22:18 ? 00:00:00 [kworker/0:0]

txn2000+ 13741 13645 0 22:18 ? 00:00:00 sshd: txn200004@notty

txn2000+ 13742 13741 0 22:18 ? 00:00:00 /usr/libexec/openssh/sftp-server

root 13789 2569 0 22:20 ? 00:00:00 sshd: bxs220001 [priv]

root 13795 2569 0 22:20 ? 00:00:00 sshd: bxs220001 [priv]

bxs2200+ 13797 13789 0 22:20 ? 00:00:00 sshd: bxs220001@pts/3

bxs2200+ 13798 13797 0 22:20 pts/3 00:00:00 -bash

bxs2200+ 13838 13795 0 22:20 ? 00:00:00 sshd: bxs220001@notty

bxs2200+ 13852 13838 0 22:20 ? 00:00:00 /usr/libexec/openssh/sftp-server

bxs2200+ 13894 13798 0 22:20 pts/3 00:00:02 vim q1.sh

root 13916 2 0 22:21 ? 00:00:00 [kworker/8:0]

root 13923 2 0 22:21 ? 00:00:00 [kworker/15:2]

root 13969 2 0 22:23 ? 00:00:00 [kworker/u96:1]

root 13995 2 0 22:23 ? 00:00:00 [kworker/u98:0]

root 13996 2 0 22:23 ? 00:00:00 [kworker/u97:0]

root 13997 2 0 22:23 ? 00:00:00 [kworker/u97:3]

root 14096 2135 0 22:25 ? 00:00:00 sleep 60

txn2000+ 14120 13648 0 22:25 pts/0 00:00:00 ./dot2m

txn2000+ 14121 14120 0 22:25 pts/0 00:00:00 sh -c date; hostname; whoami; ps -eaf; ls \*

txn2000+ 14125 14121 0 22:25 pts/0 00:00:00 ps -eaf

root 14555 2 0 Sep24 ? 00:00:00 [lockd]

root 23303 2 0 Sep25 ? 00:00:01 [kworker/8:2H]

root 23322 2 0 Sep25 ? 00:00:02 [kworker/12:2H]

root 23323 2 0 Sep25 ? 00:04:36 [kworker/10:2H]

root 23361 2 0 Sep25 ? 00:00:00 [kworker/6:2H]

root 23378 2 0 Sep25 ? 00:06:14 [kworker/2:2H]

root 23448 2 0 Sep25 ? 00:00:00 [kworker/10:0H]

root 23534 2 0 Sep25 ? 00:05:10 [kworker/4:1H]

root 23557 2 0 Sep25 ? 00:05:31 [kworker/0:1H]

root 23578 2 0 Sep25 ? 00:04:15 [kworker/8:0H]

root 28661 2 0 Oct03 ? 00:02:46 [kworker/12:0H]

root 29721 1 0 Sep24 ? 00:43:07 /usr/sbin/automount --systemd-service --dont-check-daemon

root 30479 2 0 Oct12 ? 00:00:00 [nfsv4.0-svc]

root 34207 2 0 Oct20 ? 00:00:12 [kworker/10:0]

root 35991 2 0 Oct20 ? 00:00:03 [kworker/11:2]

root 37299 2 0 Oct20 ? 00:00:03 [kworker/9:1]

root 37405 2 0 Oct20 ? 00:00:08 [kworker/1:2]

root 37518 2 0 Oct20 ? 00:00:02 [kworker/15:0]

root 38722 2 0 Oct19 ? 00:00:25 [kworker/14:0]

root 39858 2 0 01:24 ? 00:00:05 [kworker/7:1]

root 42598 2 0 03:27 ? 00:00:11 [kworker/4:1]

root 42854 2 0 03:28 ? 00:00:12 [kworker/8:2]

root 43854 2 0 03:37 ? 00:00:00 [kworker/8:1]

root 43913 2 0 03:39 ? 00:00:00 [kworker/14:1]

root 44389 2 0 Oct01 ? 00:03:01 [kworker/6:1H]

root 44809 2 0 04:20 ? 00:00:00 [kworker/4:2]

root 45007 2 0 Oct19 ? 00:00:07 [kworker/13:0]

root 46146 2 0 Oct19 ? 00:00:00 [kworker/1:0]

dot1m dot1m.c dot1s dot1s.c dot2m dot2m.c dot2s dot2s.c

\*\*Thread to lock the mutex\*\*

Thread 1 did 100000 to 200000: mysum=100000.000000 global sum=100000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 7 did 700000 to 800000: mysum=100000.000000 global sum=200000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 3 did 300000 to 400000: mysum=100000.000000 global sum=300000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 5 did 500000 to 600000: mysum=100000.000000 global sum=400000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 9 did 900000 to 1000000: mysum=100000.000000 global sum=500000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

\*\*Thread to lock the mutex\*\*

\*\*Thread to lock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 0 did 0 to 100000: mysum=100000.000000 global sum=600000.000000

\*\*Thread to unlock the mutex\*\*

\*\*Thread to lock the mutex\*\*

Thread 8 did 800000 to 900000: mysum=100000.000000 global sum=700000.000000

\*\*Thread to unlock the mutex\*\*

Thread 6 did 600000 to 700000: mysum=100000.000000 global sum=800000.000000

\*\*Thread to unlock the mutex\*\*

Thread 2 did 200000 to 300000: mysum=100000.000000 global sum=900000.000000

\*\*Thread to unlock the mutex\*\*

Thread 4 did 400000 to 500000: mysum=100000.000000 global sum=1000000.000000

\*\*Thread to unlock the mutex\*\*

Sum = 1000000.000000

End Lab and Exit

{cslinux2:~/week10Lab1} date

Mon Oct 21 22:27:00 CDT 2024

{cslinux2:~/week10Lab1} ls -l

unamtotal 192

-rwx--x--x 1 txn200004 se 13160 Oct 21 22:21 dot1m

-rw------- 1 txn200004 se 4830 Oct 21 22:21 dot1m.c

-rwx--x--x 1 txn200004 se 8528 Oct 21 22:22 dot1s

-rw------- 1 txn200004 se 2349 Oct 21 22:21 dot1s.c

-rwx--x--x 1 txn200004 se 13392 Oct 21 22:25 dot2m

-rw------- 1 txn200004 se 5047 Oct 21 22:24 dot2m.c

-rwx--x--x 1 txn200004 se 8576 Oct 21 22:25 dot2s

-rw------- 1 txn200004 se 2399 Oct 21 22:24 dot2s.c

{cslinux2:~/week10Lab1} uname -a

Linux cslinux2.utdallas.edu 3.10.0-1160.119.1.el7.x86\_64 #1 SMP Tue Jun 4 14:43:51 UTC 2024 x86\_64 x86\_64 x86\_64 GNU/Linux

{cslinux2:~/week10Lab1} exit

logout

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Session stopped

- Press <Return> to exit tab

- Press R to restart session

- Press S to save terminal output to file