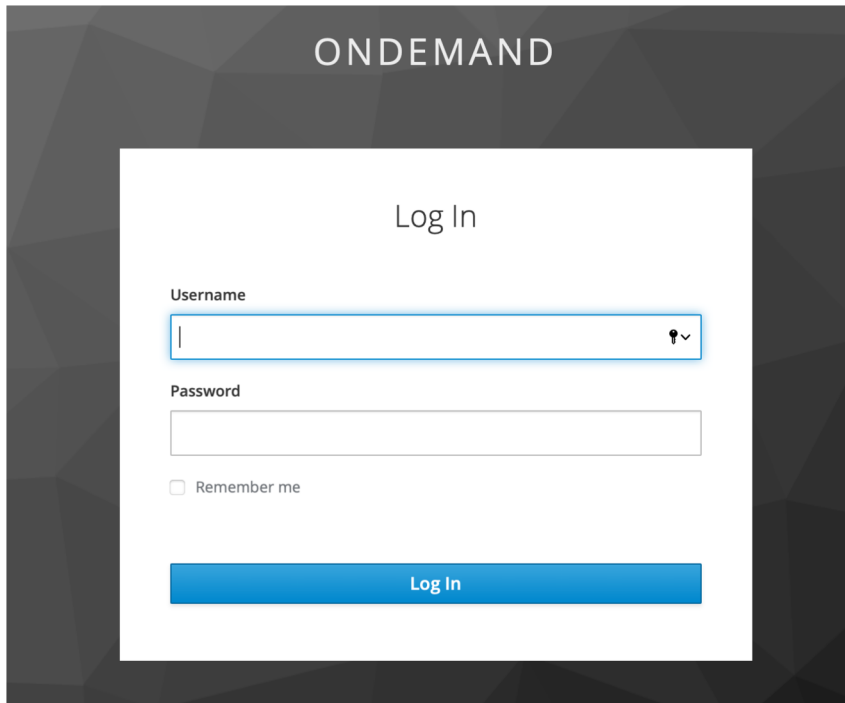


Open OnDemand web portal

- <https://www-test.chpc.utah.edu/documentation/software/ondemand.php>
- <https://ondemand.chpc.utah.edu>



ONDEMAND

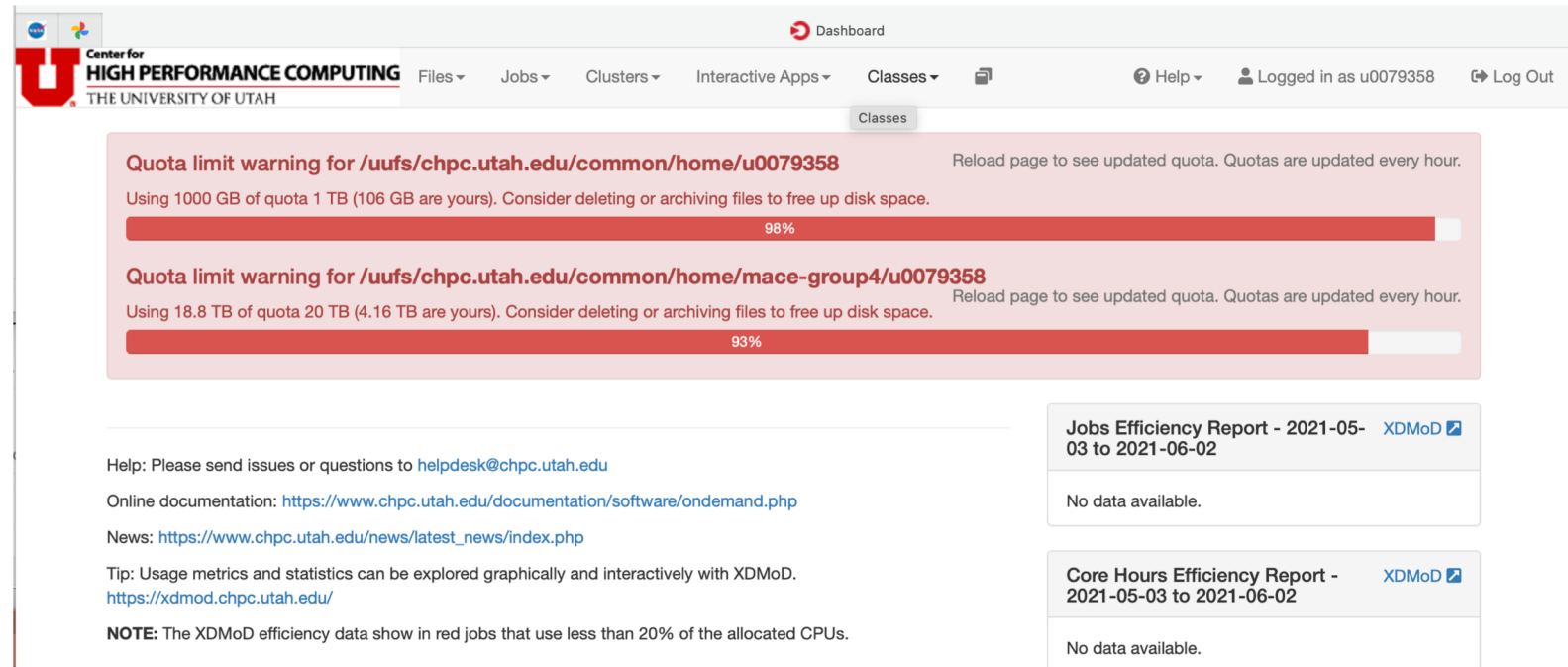
Log In

Username

Password

Remember me

Log In



Dashboard

Center for HIGH PERFORMANCE COMPUTING THE UNIVERSITY OF UTAH

Files Jobs Clusters Interactive Apps Classes

Help Logged in as u0079358 Log Out

Classes

Quota limit warning for /uufs/chpc.utah.edu/common/home/u0079358 Reload page to see updated quota. Quotas are updated every hour.
Using 1000 GB of quota 1 TB (106 GB are yours). Consider deleting or archiving files to free up disk space.
98%

Quota limit warning for /uufs/chpc.utah.edu/common/home/mace-group4/u0079358 Reload page to see updated quota. Quotas are updated every hour.
Using 18.8 TB of quota 20 TB (4.16 TB are yours). Consider deleting or archiving files to free up disk space.
93%

Help: Please send issues or questions to helpdesk@chpc.utah.edu

Online documentation: <https://www.chpc.utah.edu/documentation/software/ondemand.php>

News: https://www.chpc.utah.edu/news/latest_news/index.php

Tip: Usage metrics and statistics can be explored graphically and interactively with XDMoD. <https://xdmod.chpc.utah.edu/>

NOTE: The XDMoD efficiency data show in red jobs that use less than 20% of the allocated CPUs.

Jobs Efficiency Report - 2021-05-03 to 2021-06-02 XDMoD

No data available.

Core Hours Efficiency Report - 2021-05-03 to 2021-06-02 XDMoD

No data available.

Dashboard

Jobs Clusters Interactive Apps Classes

Desktops

- Basic Interactive Desktop
- Expert Interactive Desktop

IDEs

- ANSYS Electronics Desktop
- ANSYS Workbench
- Abaqus
- COMSOL Multiphysics
- IDL
- Lumerical DEVICE Suite
- MATLAB
- Mathematica

Servers

- Code Server
- Jupyter Lab
- Jupyter Notebook
- R Shiny app
- RStudio server

Visualization

- Coot
- IDV
- Meshroom
- ParaView
- VMD

Jobs Effective 03 to 2021

No data available

Core Hours 2021-05-03 to 2021-05-03

No data available

Recently Created 05-03 to 2021-05-03

ID	Name
No data available	

Showing first dashboard |

Home / My Interactive Sessions / IDL

Classes

- Chemical Engineering
- CHEN2450
- CHEN3603

Interactive Apps

- Desktops
 - Basic Interactive Desktop
 - Expert Interactive Desktop
- IDEs
 - ANSYS Electronics Desktop
 - ANSYS Workbench
 - Abaqus

IDL

This app will launch an IDL IDE on a [HPC cluster](#) or on a [Frisco node](#). You will be able to interact with the IDL through a VNC session.

[GPU specification](#) is optional for the partitions that have them.

Cluster

notchpeak

Select the cluster or Frisco node to create this session on.

IDL version

8.8

This defines the version of IDL you want to load.

Number of cores

1

Maximum number of CPU cores on notchpeak-shared-short is

v100:2)

I would like to receive an email when the session starts

Launch

* The IDL session data for this session can be accessed under the [data root directory](#).

IDL (2644393)

1 node

1 core

Running

Host: >_notch308.ipob.int.chpc.utah.edu

Delete

Created at: 2021-06-02 10:25:31 MDT

Time Remaining: 59 minutes

Session ID: 122442c9-4a4f-4023-aea2-b411447de181

Compression



0 (low) to 9 (high)

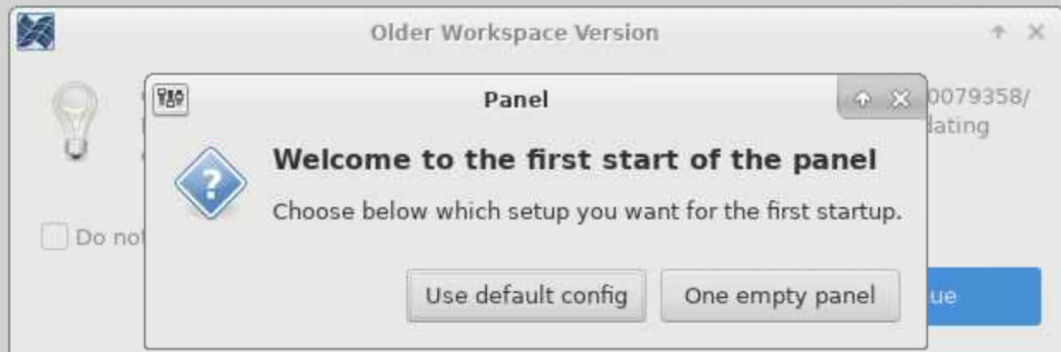
Image Quality



0 (low) to 9 (high)

Launch IDL

View Only (Share-able Link)



IDLWorkspace - IDL Workbench

File Edit Source Project Macros Run Window Help

read_2ds_camp2ex.pro cap2_clean_processed.pro step1_data_common_grid.pro

```
*****
; Put marcus data on 30 sec avg grid
*****
pro step1_data_common_grid,date_str
*****
; Constants
*****

date_str='20180320'
;date_str='20171130'
;date_str='20171221'

; No cloud and missing data value
nocloud=-9999
missing=-8888

; Directory
chpc_dir='/uufs/chpc.utah.edu/common/home/'
; Output dir
fdir=chpc_dir+'mace-group4/field_programs/marcus/mpl_calibration_rcor/'

; averaging interval
dt_sec=300

; 5 seconds in units of days
sec5=50/(600*600*240)

; If this is set to no then this program will plot previously averaged data
; If this is set to yes then it will create an averaged file from scratch
```

IDL Console Command History Problems

Current Directory: /uufs/chpc.utah.edu/common/home/u0079358

IDL 8.8.0 (linux x86_64 m64).
(c) 2020, Harris Geospatial Solutions, Inc.

Licensed for use by: University of Utah - Martin Cuma
License: 97076

IDL>

Classes

Chemical Engineering

CHEN2450

CHEN3603

Interactive Apps

Desktops

Basic Interactive Desktop

Expert Interactive Desktop

IDEs

ANSYS Electronics Desktop

ANSYS Workbench

Abaqus

COMSOL Multiphysics

IDL

Lumerical DEVICE Suite

MATLAB

Mathematica

Servers

Code Server

Jupyter Lab

Basic Interactive Desktop

This app will launch an interactive desktop on one compute node. You will have full access to the resources these nodes provide. This is analogous to an interactive batch job.

Cluster

notchpeak

Select the cluster or Frisco node to create this desktop session on.

Number of hours

1

Number of tasks (CPU cores)

1

Maximum number of CPU cores on notchpeak-shared-short is 32, see [cluster help pages](#) for other cluster's node counts.

Account

notchpeak-shared-short

Partition

notchpeak-shared-short

I would like to receive an email when the session starts

Launch

* The Basic Interactive Desktop session data for this session can be accessed under the [data root directory](#).

Basic Interactive Desktop (2644399)

Queued

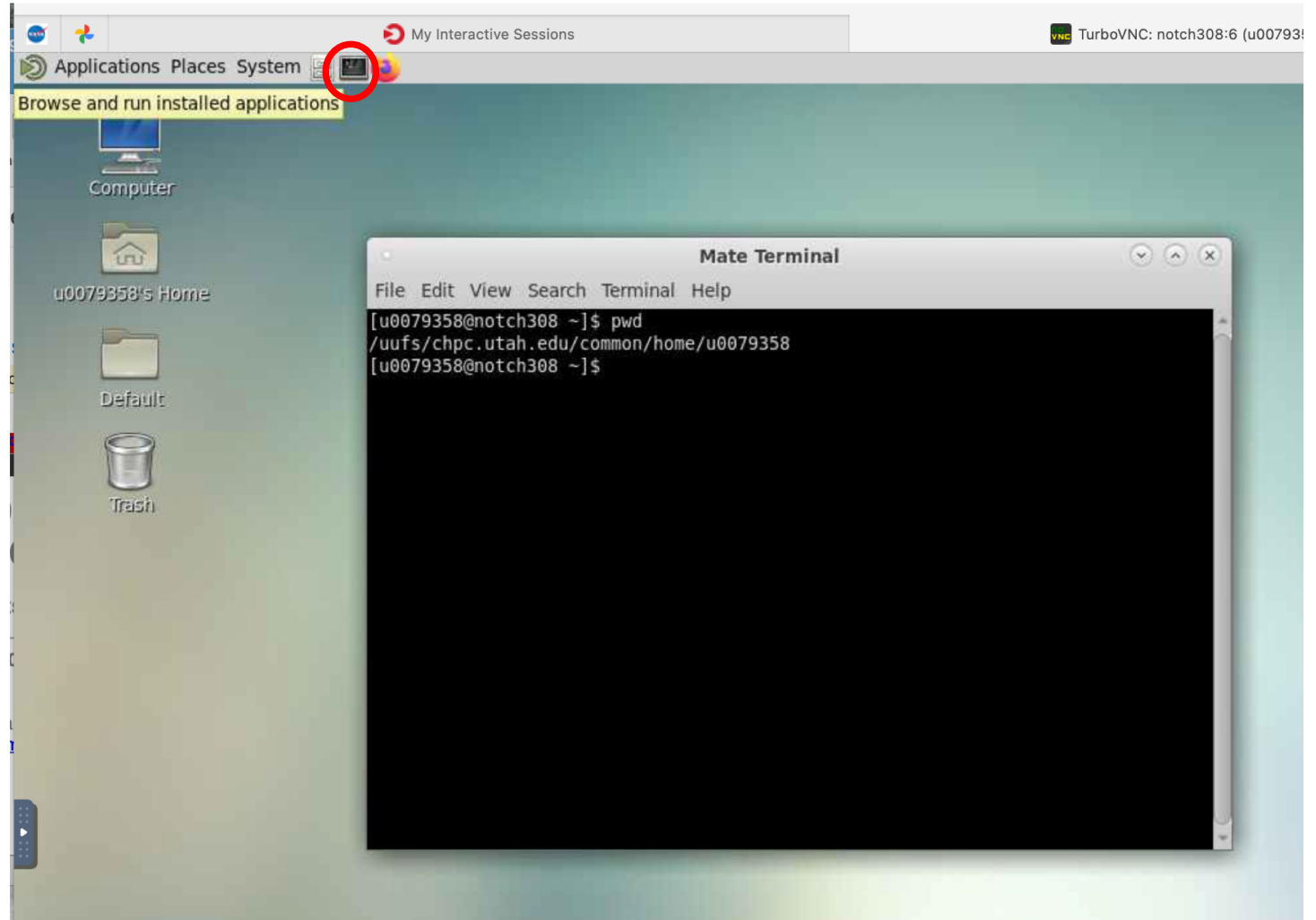
Created at: 2021-06-02 10:29:48 MDT

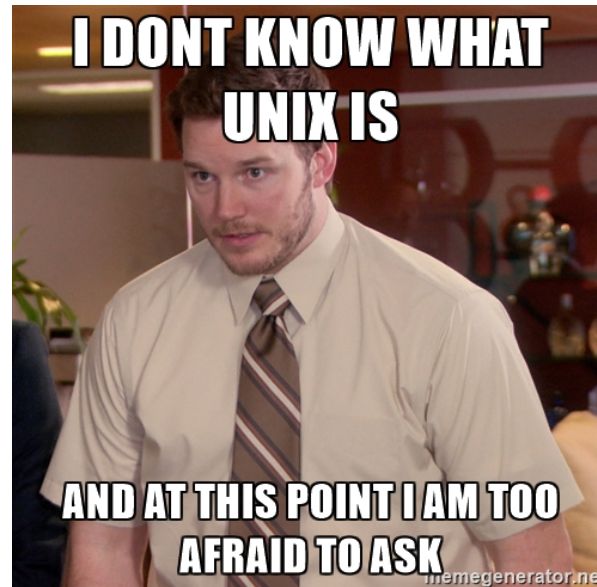
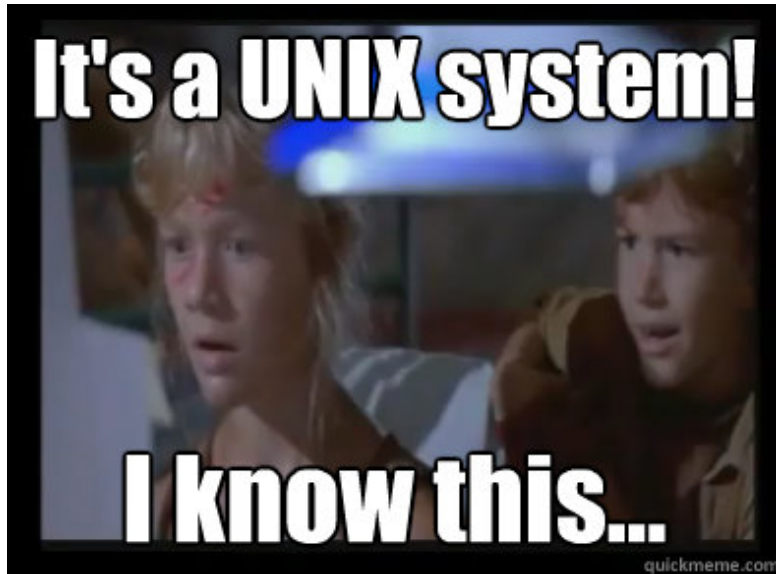
Delete

Time Requested: 1 hour

Session ID: 91d23666-51df-4d84-a893-3e5e20b0f413

Please be patient as your job currently sits in queue. The wait time depends on the number of cores as well as time requested.



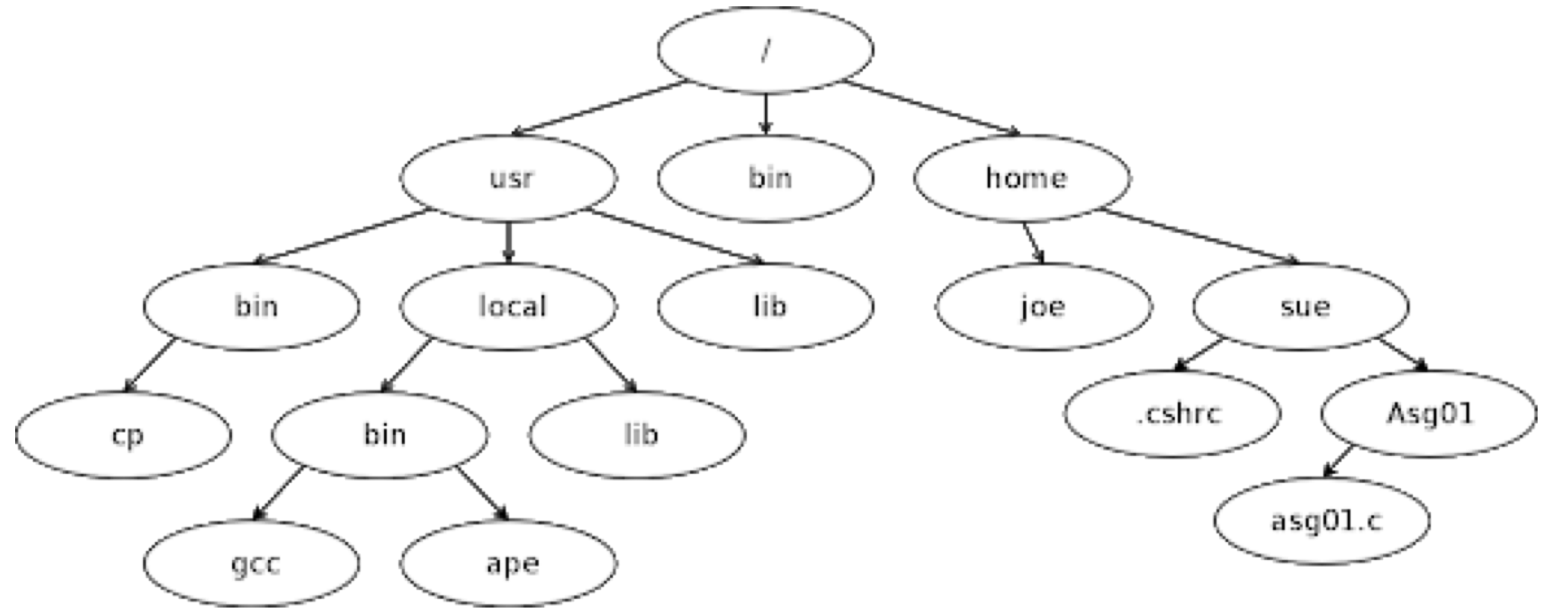
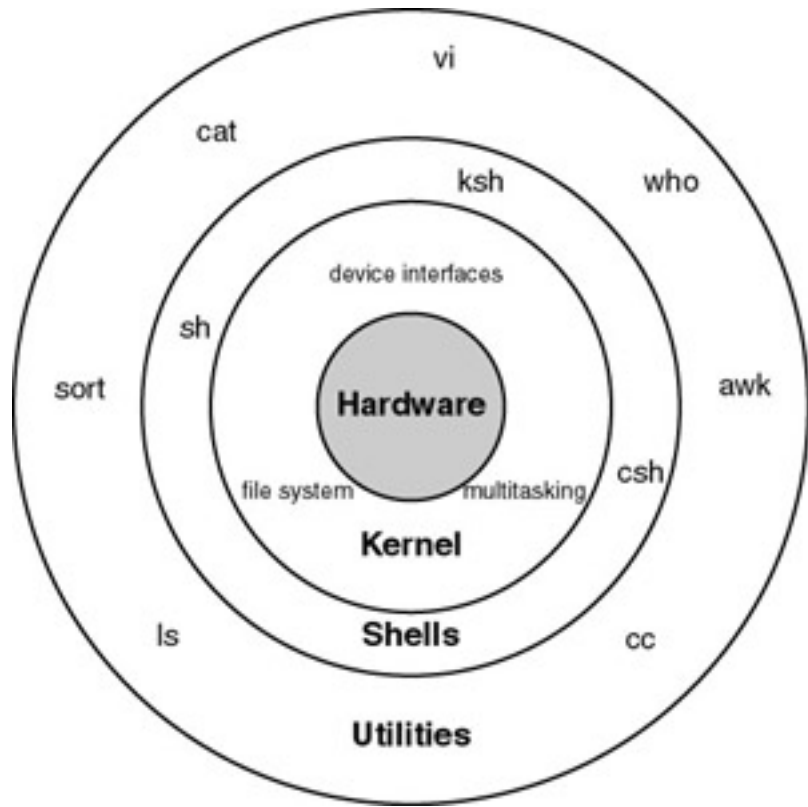


THE VELOCIRAPTORS ARE closing in. The only chance the surviving humans at Jurassic Park have is Lex, an adolescent hacker who has to find way to reactivate the security system. And they're in luck. "It's a UNIX system!" she exclaims. "I know this!"

<https://www.tutorialspoint.com/unix/unix-getting-started.htm>

- What is Unix ?
- The Unix operating system is a set of programs that act as a link between the computer and the user.
- The computer programs that allocate the system resources and coordinate all the details of the computer's internals is called the **operating system** or the **kernel**.
- Users communicate with the kernel through a program known as the **shell**. The shell is a command line interpreter; it translates commands entered by the user and converts them into a language that is understood by the kernel.
- Unix was originally developed in 1969 by a group of AT&T employees Ken Thompson, Dennis Ritchie, Douglas McIlroy, and Joe Ossanna at Bell Labs.
- There are various Unix variants available in the market. Solaris Unix, AIX, HP Unix and BSD are a few examples. Linux is also a flavor of Unix which is freely available.
- Several people can use a Unix computer at the same time; hence Unix is called a multiuser system.
- A user can also run multiple programs at the same time; hence Unix is a multitasking environment.

- The main concept that unites all the versions of Unix is the following four basics –
- **Kernel** – The kernel is the heart of the operating system. It interacts with the hardware and most of the tasks like memory management, task scheduling and file management.
- **Shell** – The shell is the utility that processes your requests. When you type in a command at your terminal, the shell interprets the command and calls the program that you want. The shell uses standard syntax for all commands. C Shell, Bourne Shell and Korn Shell are the most famous shells which are available with most of the Unix variants.
- **Commands and Utilities** – There are various commands and utilities which you can make use of in your day to day activities. **cp**, **mv**, **cat** and **grep**, etc. are few examples of commands and utilities. There are over 250 standard commands plus numerous others provided through 3rd party software. All the commands come along with various options.
- **Files and Directories** – All the data of Unix is organized into files. All files are then organized into directories. These directories are further organized into a tree-like structure called the **filesystem**.



All data in Unix is organized into files. All files are organized into directories. These directories are organized into a tree-like structure called the filesystem.

`/uufs/chpc.utah.edu/common/home/u0079358`

ls

- **First Column** – Represents the file type and the permission given on the file. Below is the description of all type of files. -=regular file, d=directory
- **Second Column** – Represents the number of memory blocks taken by the file or directory.
- **Third Column** – Represents the owner of the file. This is the Unix user who created this file.
- **Fourth Column** – Represents the group of the owner. Every Unix user will have an associated group.
- **Fifth Column** – Represents the file size in bytes.
- **Sixth Column** – Represents the date and the time when this file was created or modified for the last time.
- **Seventh Column** – Represents the file or the directory name.

Metacharacters

- Metacharacters have a special meaning in Unix. For example, `*` and `?` are metacharacters. We use `*` to match 0 or more characters, a question mark (`?`) matches with a single character.
- For Example –
- `$ls ch*.doc`
- Displays all the files, the names of which start with **ch** and end with **.doc** –
- `ch01-1.doc ch010.doc ch02.doc ch03-2.doc ch04-1.doc ch040.doc ch05.doc ch06-2.doc ch01-2.doc ch02-1.doc c`
- Here, `*` works as meta character which matches with any character. If you want to display all the files ending with just **.doc**, then you can use the following command –
- `$ls *.doc`

Hidden Files

An invisible file. The first character of which is the dot or the period character (.). Unix programs (including the shell) use most of these files to store configuration information.

Some common examples of the hidden files include the files –

- **.profile** – The Bourne shell (sh) initialization script
- **.kshrc** – The Korn shell (ksh) initialization script
- **.cshrc** – The C shell (csh) initialization script
- **.rhosts** – The remote shell configuration file

To list the invisible files, specify the **-a** option to **ls** –

Copying Files

To make a copy of a file use the **cp** command.

The basic syntax of the command is –

```
$ cp source_file destination_file
```

Following is the example to create a copy of the existing file **filename**.

```
$ cp filename copyfile
```

You will now find one more file **copyfile** in your current directory. This file will exactly be the same as the original file **filename**.

Renaming Files

To change the name of a file, use the **mv** command.

Following is the basic syntax –

```
$ mv old_file new_file
```

The following program will rename the existing file **filename** to **newfile**.

```
$ mv filename newfile
```

The **mv** command will move the existing file completely into the new file. In this case, you will find only **newfile** in your current directory.

Deleting Files

To delete an existing file, use the **rm** command. Following is the basic syntax –

```
$ rm filename
```

Caution – A file may contain useful information. It is always recommended to be careful while using this **Delete** command.

It is better to use the **-i** option along with **rm** command.

Following is the example which shows how to completely remove the existing file **filename**.

```
$ rm filename
```

You can remove multiple files at a time with the command given below –

```
$ rm filename1 filename2 filename3
```

The directory tree has a single root node, the slash character (**/**), and all other directories are contained below it.

Home Directory

The directory in which you find yourself when you first login is called your home directory.

You will be doing much of your work in your home directory and subdirectories that you'll be creating to organize your files.

You can go in your home directory anytime using the following command –

```
$cd ~
```

Here **~** indicates the home directory. Suppose you have to go in any other user's home directory, use the following command –

```
$cd ~username
```

Absolute/Relative Pathnames

Directories are arranged in a hierarchy with root (/) at the top.

The position of any file within the hierarchy is described by its pathname.

Elements of a pathname are separated by a /.

A pathname is absolute, if it is described in relation to root, thus absolute pathnames always begin with a /.

Following are some examples of absolute filenames.

/etc/passwd /users/sjones/chem/notes /dev/rdisk/Os3

A pathname can also be relative to your current working directory. Relative pathnames never begin with /.

Relative to a user's home directory, some pathnames might look like this: chem/notes
personal/res

To determine where you are within the filesystem hierarchy at any time, enter the command **pwd** to print the current working directory: `$pwd`

Listing Directories

To list the files in a directory, you can use the following syntax

```
$ls dirname
```

Following is the example to list all the files contained in **/usr/local** directory

```
$ls /usr/local
```

Creating Directories

Directories are created by the following command

```
$mkdir dirname
```

Here, directory is the absolute or relative pathname of the directory you want to create.

```
$mkdir mydir
```

Creates the directory **mydir** in the current directory.

```
$mkdir /tmp/test-dir
```

This command creates the directory **test-dir** in the **/tmp** directory.

The **mkdir** command produces no output if it successfully creates the requested directory.

Removing Directories

Directories can be deleted using the **rmdir** command

```
$rmdir dirname
```

Note – To remove a directory, make sure it is empty which means there should not be any file or sub-directory inside this directory.

You can remove multiple directories at a time

```
$rmdir dirname1 dirname2 dirname3 $
```

The above command removes the directories `dirname1`, `dirname2`, and `dirname3`, if they are empty.

The **rmdir** command produces no output if it is successful.

- **Single dot (.)** – This represents the current directory.
- **Double dot (..)** – This represents the parent directory.

Changing Directories

You can use the **cd** command to do more than just change to a home directory. You can use it to change to any directory by specifying a valid absolute or relative path.

```
$cd dirname
```

Here, **dirname** is the name of the directory that you want to change to.

```
$cd /usr/local/bin
```

Changes to the directory **/usr/local/bin**. From this directory, you can **cd** to the directory **/usr** using the following relative path –

```
$cd ..
```

