Usage

1. Users can request for containers by logging on to https://docker.iitd.ac.in/baadal.
2. While making a request users will have to specify the number of CPUs and RAM. The CPU constraint on containers are imposed only when there is competition of resources among containers. The Memory constraints are hard limits.
3. Users will need to select from a standard set of app templates. based on ubuntu:14.04 operating systems with standard required utilities like git.
4. Requests made by students will have to be approved by their faculty supervisors through the workflow system available at https://docker.iitd.ac.in/baadal..
5. Once a request has been approved by a cloud administrator, a container instance will start running. The container will be owned by a faculty member who can then grant access rights to other users registered in IITD LDAP.
6. Containers are not provided any public IP Addresses. Web services based containers are reverse-proxied with <container_name>.apps.iitd.ac.in.
7. User can login in docker interface and through container execute option can launch container shell and can do maintenance stuff.
8. From the user interface, users can pause, resume, stop, restart their container instances. Users can also monitor live resource utilization of their service and the processes running inside the container.
9. Users can also take backup of their container using snapshot option.Only single backup is allowed.Users are requested to maintain code through git repository running at https://git.iitd.ac.in for code backup.If somehow your container get corrupted, you can recreate your container.
10. Users can transfer files through file transfer interface available in settings page. Note for uploading file, only tar file is allowed(do not compress it with gzip).
    For linux users use,
        tar -cf <archive_name> <file_names>
    For Window users,
        Use 7zip and other softwares available.
11. User can also request for mysql database if required for their application.
12. Advanced Limitations:
    a. Shared memory size is 64 MB (/dev/shm)
    b. Ulimits
        i. NProc = 500:1000
        ii. NOFIle = 4000:8000

Php+apache

For running web server

- Run cmd :cd /var/www/app
- Run cmd :git clone <git_url> .
- Run cmd :service apache2 start
- Visit <container_name>.apps.iitd.ac.in

Php+apache+mysql

For running web server

- Run cmd :cd /var/www/app
- Run cmd :git clone <git_url> .
- Run cmd :service apache2 start
- Visit <container_name>.apps.iitd.ac.in
- Use mysql as mysql hostname

Wordpress

For first time users

- Run cmd :export WORDPRESS_DB_USER=<mysql_db_user>
- Run cmd :export WORDPRESS_DB_NAME=<mysql_db_name>
- Run cmd :export wordpress_db_password=<mysql_db_password>
- Run cmd :source /etc/apache2/envvars
- Run cmd :/entrypoint.sh apache2
- Visit <container_name>.apps.iitd.ac.in

Visit url and set up wordpress for its use as guided.

Python

- Comes with 3.5 version

Matlab

For running Matlab

- Run cmd :/usr/local/martlabr2015/bin/matlab
- Visit <container_name>.apps.iitd.ac.in/vnc.html
- Give vnc password (default is ‘sword*fish’)

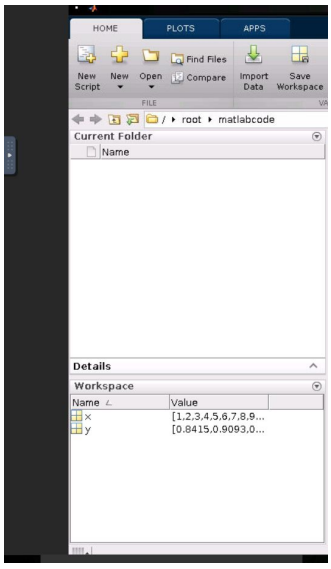
For changing password ,

- Run cmd :x11vnc -storepasswd

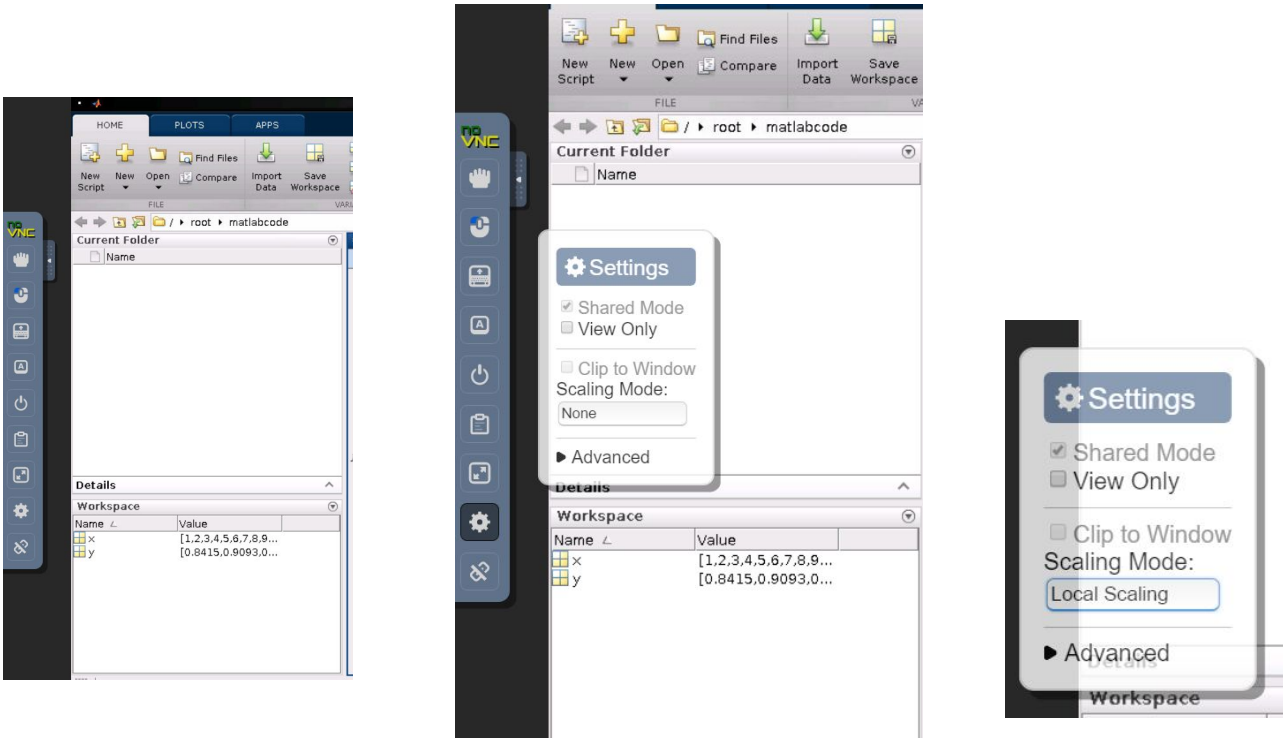
For rescaling browser window:

- Go to left panel
- Click on settings button
- Choose option local scaling in scaling mode.

Note the panel (of blue color) in extreme left

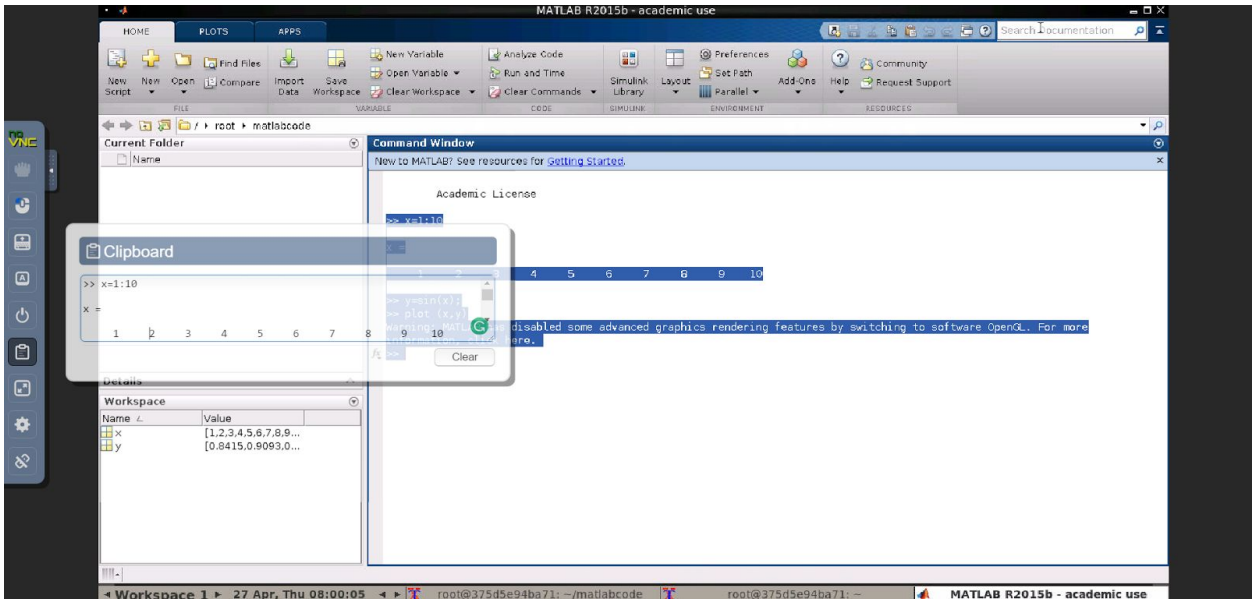


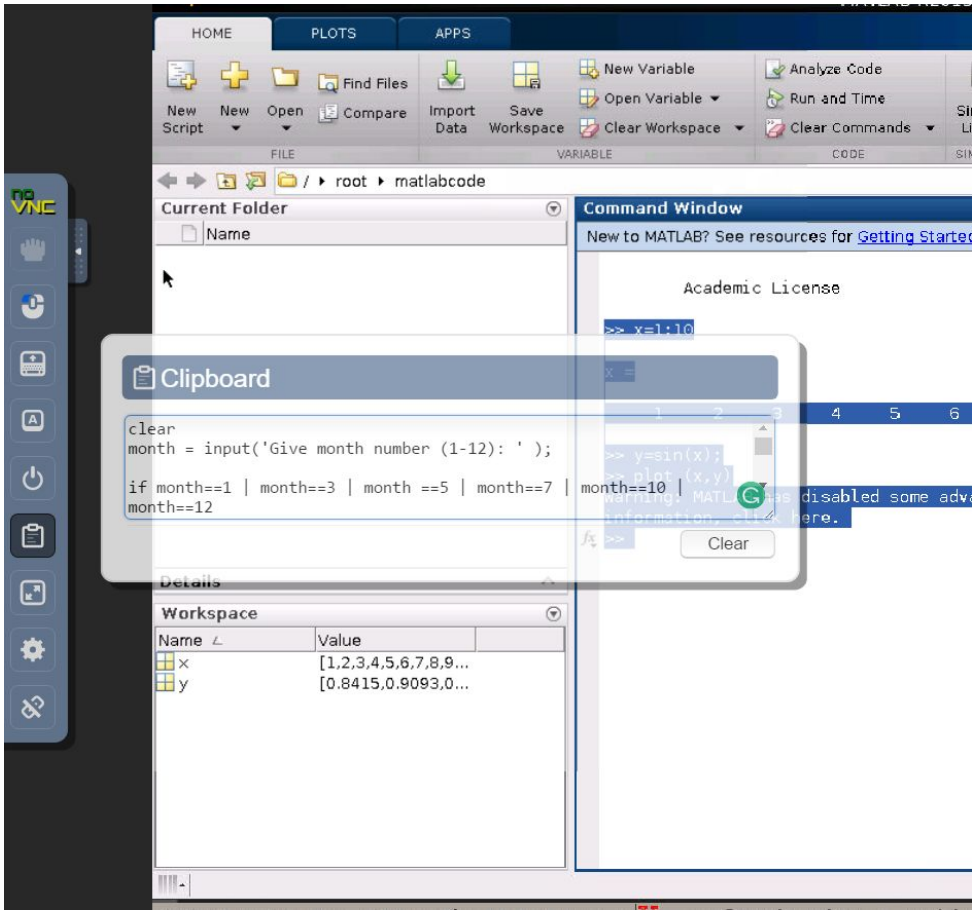
Click on the button and options will appear.

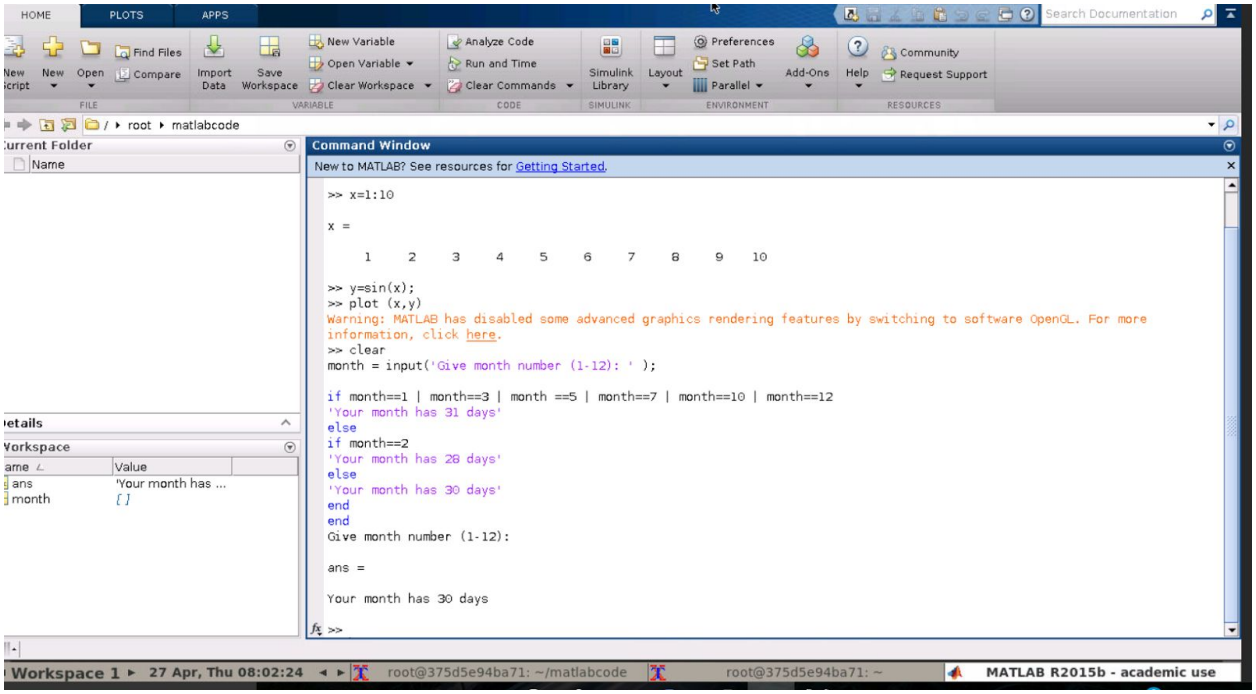


Click the settings button and choose local scaling mode.

For clipboard access, find clipboard button in the panel , anything selected in remote container appears in the clipboard text box and you can paste in the clipboard for text.




HOME
PLOTS
APPS
New Script
New
Open
Find Files
Compare
Import Data
Save Workspace
New Variable
Open Variable
Clear Workspace
Analyze Code
Run and Time
Clear Commands
FILE
VARIABLE
CODE
root ▸ matlabcode
Current Folder
Name
Command Window
New to MATLAB? See resources for Getting Started
Academic License
>> x=1:10
Clipboard
clear
month = input('Give month number (1-12): ');
if month==1 | month==3 | month ==5 | month==7 | month==10 |
month==12
Clear
Details
Workspace
Name
Value
x
[1,2,3,4,5,6,7,8,9...
y
[0.8415,0.9093,0...


HOME
PLOTS
APPS
Search Documentation
root ▸ matlabcode
Current Folder
Name
Command Window
New to MATLAB? See resources for Getting Started.
>> x=1:10
x =
1 2 3 4 5 6 7 8 9 10
>> y=sin(x);
>> plot (x,y)
Warning: MATLAB has disabled some advanced graphics rendering features by switching to software OpenGL. For more information, click here.
>> clear
month = input('Give month number (1-12): ');
if month==1 | month==3 | month ==5 | month==7 | month==10 | month==12
'Your month has 31 days'
else
if month==2
'Your month has 28 days'
else
'Your month has 30 days'
end
end
Give month number (1-12):
ans =
Your month has 30 days
>>
Workspace
Value
ans
'Your month has ...
month
[]
Workspace 1
27 Apr, Thu 08:02:24
root@375d5e94ba71: ~/matlabcode
root@375d5e94ba71: ~
MATLAB R2015b - academic use

Gcc

- Comes with gcc and g++ 6.1 version

Python_ml

- Comes with python 3.6
- Installed libraries
    - Numpy
    - Scipy
    - Matplotlib
    - Sklearn
    - Panda
    - Nltk
    - Theano
    - Gensim
    - Spacy
    - Keras