Visualization

Visualization Consulting

UA HPC offers consulting services in visualization.

hpc-consult@list.arizona.edu: Request Technical Support from consultants

Paraview and Visit are available on Ocelote as modules

VPN - Virtual Private Network

A VPN service (Virtual Private Network) is available for HPC, primarily for applications that cannot navigate the bastion host for visualization, and because the performance is frequently better than tunneling through the Bastion host. This is separate from the UA VPN.

GLX

The functionality of GLX requires synchronization between your workstation and the Ocelote nodes. Keep in mind that on Ocelote you will first access the login nodes which do not have a graphics. You may need to log into a GPU node using the function that starts an interactive session.

These steps provide a practical example for using the Visualization software called VisIt

1. ssh -X hpc.arizona.edu
2. echo $DISPLAY  # should show localhost
3. ocelote -X
4. qsub -I -X -N jobtest -W group_list=hpcteam -q windfall -l select=1:ncpus=28:mem=168gb:ngpus=1 -l cput=1:0:0 -l walltime=1:0:0  # starts an interactive session on a GPU node. Be sure to use the -X which tunnels the graphical functionality. And replace group_list value with the group you belong to.
5. module load cuda80/gdk  # This is key as it has the drivers for the GPU
6. glxinfo
   # You might get “Bad Value” error on the Mac command line. Fixed with entering this command on the Mac: defaults write org.macosforge.xquartz.X11 enable_iglx -bool true
   # On a linux workstation you might need to create a file "/etc/X11/xorg.conf" with the following section:

   Section "ServerFlags"
     Option "AllowIndirectGLX" "on"
     Option "IndirectGLX" "on"
   EndSection
7. glxspheres64 # this is a good test of rendering back on the workstation
8. module load visit
9. visit