1.

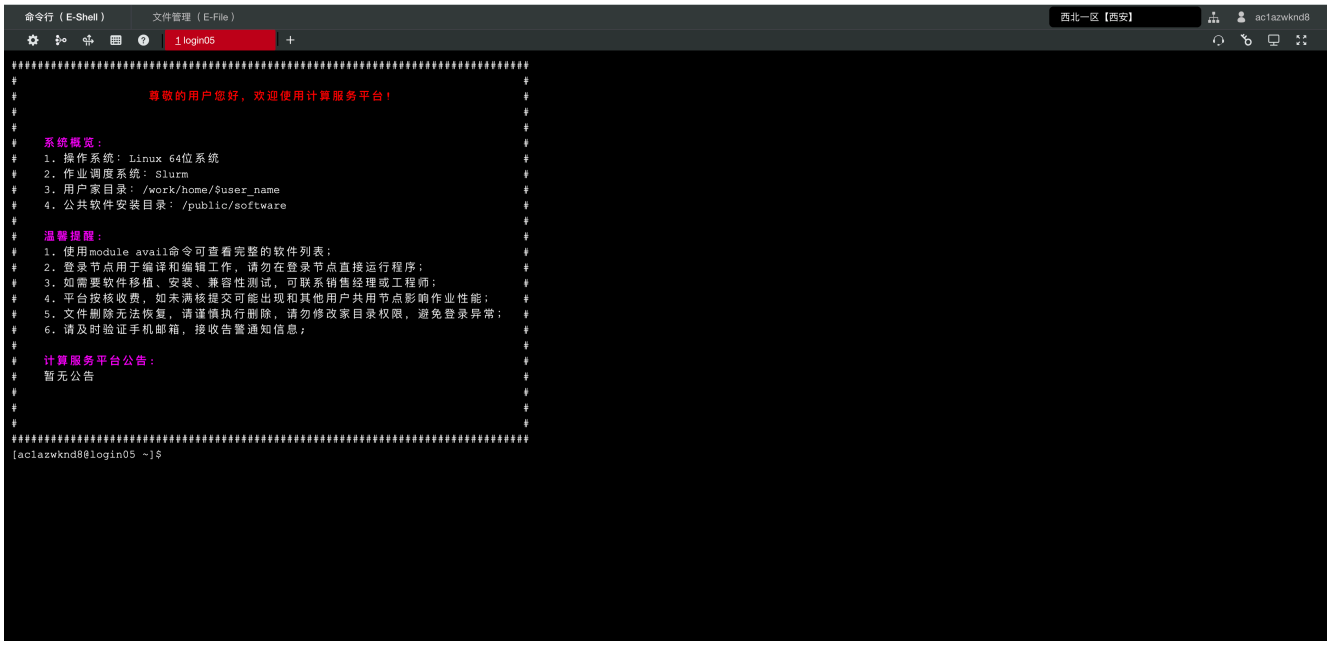
2. 曙光算力官网：https://ac.sugon.com/ac/console3/index.html#/

3. 曙光算力使用答疑群：

群聊：计图挑战赛-曙光支持群

该二维码7天内(7月21日前)有效，重新进入将更新

4. 进入e-shell



5. 分配dcu资源

```
salloc -N 1 -n 8 --gres=dcu:1 -p xahdtest（队列名） --exclusive
```

```
[ac1azwknd8@login05 ~]$ salloc -N 1 -n 8 --gres=dcu:1 -p xahdtest --exclusive
salloc: Pending job allocation 4877460
salloc: job 4877460 queued and waiting for resources
salloc: job 4877460 has been allocated resources
salloc: Granted job allocation 4877460
salloc: Waiting for resource configuration
salloc: Nodes c14r2n00 are ready for job
################################################################################
#                                                                              #
```

6. 登陆计算节点

```
################################################################################
[ac1azwknd8@login05 ~]$ ssh c14r2n00
Warning: Permanently added 'c14r2n00,10.3.14.21' (ECDSA) to the list of known hosts.
[ac1azwknd8@c14r2n00 ~]$
```

7. load anaconda以及dtk环境

```
[ac1azwknd8@c14r2n00 ~]$ module av

------------------------------------------------------------------------------- /public/software/modules/base -------------------------------------------------------------------------------
anaconda2/4.3.0                       compiler/intel/2018.5.274             mathlib/grib2/2.0.7-intel-2017        mathlib/libxc/4.3.4-intel-2017        mathlib/zlib/1.2.8-intel-2017
anaconda3/5.2.0                       compiler/intel/2020.1.217             mathlib/grib_api/1.28.0-intel-2017    mathlib/netcdf/3.6.3-intel-2017       mpi/hpcx/2.4.1-gcc-7.3.1
automake/1.16.1                       compiler/intel/2021.3.0               mathlib/gsl/2.6-intel-2017            mathlib/netcdf/4.4.1-intel-2017       mpi/hpcx/2.4.1-intel-2017
compiler/cmake/3.15.6                 compiler/rocm/3.3                     mathlib/hdf4/4.2r1-intel-2017         mathlib/opencv/3.1.0-gcc-7.3.1        mpi/hpcx/2.7.4-gcc-7.3.1
compiler/cmake/3.20.4                 mathlib/antlr/2.7.7-intel-2017        mathlib/hdf5/1.8.20-intel-2017        mathlib/openjpeg/2.3.1-intel-2017     mpi/hpcx/gcc-7.3.1
compiler/cmake/3.23.3                 mathlib/blas/3.5.0-intel-2017         mathlib/htslib/1.9-gcc-7.3.1          mathlib/pnetcdf/1.12.0-impi-2017      mpi/hpcx/intel-2017.5.239
compiler/devtoolset/7.3.1             mathlib/boost/1.67.0-intel-2017       mathlib/ioapi/3.2-intel-2017          mathlib/pnetcdf/1.12.1-hpcx-intel-2017 mpi/intelmpi/2017.4.239
compiler/dtk/21.04                    mathlib/elpa/2019.05.001-impi-2020    mathlib/jasper/1.900.1-gcc-7.3.1      mathlib/pnetcdf/1.8.1-hpcx-intel-2017  mpi/intelmpi/2018.4.274
compiler/dtk/22.04.2                  mathlib/fftw/3.3.10-intelmpi_21-double mathlib/jasper/1.900.1-intel-2017    mathlib/scalapack/2.0.0-intel-2017    mpi/intelmpi/2020.1.217
compiler/dtk/22.10                    mathlib/fftw/3.3.10-intelmpi_21-single mathlib/lapack/3.8.0-gcc-7.3.1       mathlib/szip/2.1.1-intel-2017         mpi/intelmpi/2021.3.0
compiler/dtk/22.10.1                  mathlib/fftw/3.3.8-gcc-7.3.1-double   mathlib/lapack/3.8.0-intel-2017       mathlib/udunits/2.2.25-intel-2017     mpi/mpich/3.3.2-gcc-7.3.1
compiler/dtk/23.04                    mathlib/fftw/3.3.8-gcc-7.3.1-single   mathlib/libjpeg/9.1.0-intel-2017      mathlib/udunits/2.2.26-intel-2017     mpi/openmpi/openmpi-4.1.5-gcc9.3.0
compiler/gcc/9.3.0                    mathlib/fftw/3.3.8-intel-2017-double  mathlib/libpng/1.2.50-gcc-7.3.1       mathlib/zlib/1.2.11-intel-2017        R/3.6.3-gcc-7.3.1
compiler/intel/2017.5.239             mathlib/fftw/3.3.8-intel-2017-single  mathlib/libpng/1.2.50-intel-2017      mathlib/zlib/1.2.8-gcc-7.3.1          singularity/3.7.3

                                                                              /public/software/modules/apps
```

其中注意jittor的版本为1.3.7.16，以及DTK版本为compiler/dtk/22.04.2

```
[ac1azwknd8@c14r2n00 ~]$ module load anaconda3/5.2.0
[ac1azwknd8@c14r2n00 ~]$ source activate jt
(jt) [ac1azwknd8@c14r2n00 ~]$ conda list
# packages in environment at /work/home/ac1azwknd8/.conda/envs/jt:
#
# Name                    Version                   Build  Channel
_libgcc_mutex             0.1                        main
astunparse                1.6.3                     <pip>
backcall                  0.2.0                     <pip>
ca-certificates           2023.01.10           h06a4308_0
certifi                   2023.5.7                  <pip>
certifi                   2022.12.7          py37h06a4308_0
charset-normalizer        3.1.0                     <pip>
decorator                 5.1.1                     <pip>
dill                      0.3.6                     <pip>
dominate                  2.8.0                     <pip>
idna                      3.4                       <pip>
imageio                   2.31.1                    <pip>
ipdb                      0.13.13                   <pip>
ipython                   7.34.0                    <pip>
jedi                      0.18.2                    <pip>
jieba                     0.42.1                    <pip>
jittor                    1.3.7.16                  <pip>
jtorch                    0.1.3                     <pip>
ld_impl_linux-64          2.38                 h1181459_1
libffi                    3.3                  he6710b0_2
libgcc-ng                 9.1.0                hdf63c60_0
libstdcxx-ng              9.1.0                hdf63c60_0
matplotlib-inline         0.1.6                     <pip>
ncurses                   6.3                  h7f8727e_2
networkx                  2.6.3                     <pip>
numpy                     1.21.6                    <pip>
openssl                   1.1.1t               h7f8727e_0
packaging                 23.1                      <pip>
parso                     0.8.3                     <pip>
pexpect                   4.8.0                     <pip>
pickleshare               0.7.5                     <pip>
(jt) [ac1azwknd8@c14r2n00 ~]$ module list
Currently Loaded Modulefiles:
  1) compiler/dtk/22.04.2       2) compiler/devtoolset/7.3.1   3) mpi/hpcx/gcc-7.3.1         4) anaconda3/5.2.0
(jt) [ac1azwknd8@c14r2n00 ~]$
```

8. 上传好数据，并修改对应训练命令的路径，

   以及加入环境变量:

```
export DISABLE_MULTIPROCESSING=1
```

```
(jt) [aclazwknd8@c14r2n00 project]$ cd JGAN-master/
(jt) [aclazwknd8@c14r2n00 JGAN-master]$ ls
assets  competition  data  models  README.md  requirements.txt
(jt) [aclazwknd8@c14r2n00 JGAN-master]$ cd models/
(jt) [aclazwknd8@c14r2n00 models]$ ls
aae    began  bicyclegan  cluster_gan  context_encoder  dcgan   ebgan   gan     infogan  pix2pix  relativistic_gan  softmax_gan  unit  wgan_div
acgan  bgan   cgan        cogan        cyclegan         dragan  esrgan  gaugan  lsgan    pixelda  sgan              stargan      wgan  wgan_gp
(jt) [aclazwknd8@c14r2n00 models]$ cd gaugan/
(jt) [aclazwknd8@c14r2n00 gaugan]$ ls
checkpoints  data  label_to_img.json  models  options  pix2pix_trainer.py  __pycache__  README.md  requirements.txt  spade_test.py  spade_train.py  test.py  test.sh  train.py  train.sh  util
(jt) [aclazwknd8@c14r2n00 gaugan]$ cat train.sh
CUDA_VISIBLE_DEVICES="0" python train.py --input_path /work/home/aclazwknd8/project/train_resized
(jt) [aclazwknd8@c14r2n00 gaugan]$ ls
checkpoints  data  label_to_img.json  models  options  pix2pix_trainer.py  __pycache__  README.md  requirements.txt  spade_test.py  spade_train.py  test.py  test.sh  train.py  train.sh  util
(jt) [aclazwknd8@c14r2n00 gaugan]$ export DISABLE_MULTIPROCESSING=1
(jt) [aclazwknd8@c14r2n00 gaugan]$ ls
checkpoints  data  label_to_img.json  models  options  pix2pix_trainer.py  __pycache__  README.md  requirements.txt  spade_test.py  spade_train.py  test.py  test.sh  train.py  train.sh  util
```

9. 训练

```
(jt) [aclazwknd8@c14r2n00 gaugan]$ sh train.sh
训练生成数据存储在./checkpoints/bs4vae中
[i 0629 14:38:17.553260 84 lock.py:85] Create lock file:/work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/jittor.lock
[i 0629 14:38:18.025678 84 compiler.py:955] Jittor(1.3.7.16) src: /work/home/aclazwknd8/.conda/envs/jt/lib/python3.7/site-packages/jittor
[i 0629 14:38:18.032954 84 compiler.py:956] g++ at /opt/rh/devtoolset-7/root/usr/bin/g++(7.3.1)
[i 0629 14:38:18.033213 84 compiler.py:957] cache_path: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default
[i 0629 14:38:18.144296 84 __init__.py:411] Found gdb(8.0.1) at /opt/rh/devtoolset-7/root/usr/bin/gdb.
[i 0629 14:38:18.152862 84 __init__.py:411] Found addr2line(2.28) at /opt/rh/devtoolset-7/root/usr/bin/addr2line.
[i 0629 14:38:18.241859 84 compiler.py:34] Create cache dir: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default/jit
[i 0629 14:38:18.245923 84 compiler.py:34] Create cache dir: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default/obj_files
[i 0629 14:38:18.249189 84 compiler.py:34] Create cache dir: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default/gen
[i 0629 14:38:18.252160 84 compiler.py:34] Create cache dir: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default/tmp
[i 0629 14:38:18.255427 84 compiler.py:34] Create cache dir: /work/home/aclazwknd8/.cache/jittor/jt1.3.7/g++7.3.1/py3.7.13/Linux-3.10.0-9xd7/HygonC86728532xac/default/checkpoints
[i 0629 14:38:35.563028 00 __init__.py:411] Found hipcc(22.04.2) at /public/software/compiler/dtk-22.04.2/bin/hipcc.
[i 0629 14:38:35.918134 00 rocm_compiler.py:59] ROCm (4.3.22302-889c8586) detected in /public/software/compiler/dtk-22.04.2
Compiling jittor_core(26/151) used: 62.373s eta: 299.870s
```