College of Engineering
Deep Learning Server Usage

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Overview

- Host IP address:
  - 140.123.97.173:2222 (Ubuntu 16.04)
  - 140.123.97.173:2223 (Ubuntu 16.04)
  - 140.123.97.173:2224 (Ubuntu 14.04)
- Installed：
  - Miniconda (conda version: 4.4.10)
    - Path: `/opt/anaconda/miniconda3`
  - CUDA 8.0 (default)
  - CUDA 9.0

Settings

- Use Miniconda as default Python interpreter
  - Append to `~/.bashrc`
    ```
    export PATH=/opt/anaconda/miniconda3/bin:$PATH
    ```
- Use CUDA 9.0
  - Append to `~/.bashrc`
    ```
    export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/cuda-9.0/lib64
    ```

Help

- SA Email: remorse@csie.io
- Installation
  - Python package
    - Use (conda) virtual environment and install by yourself (sudo/admin permission is not necessary)
  - Others
    - Try to use conda first
    - Ask to SA
- Problems
  - Please clearly describe the problem and send email to SA

Apply for an Account

- To apply
  - Google form https://goo.gl/forms/O0SLOw4Q7juJ8KLF3
    - Email, name, student ID, professor, username
  - After verifying, we will send the password to you
- Rules
  - Graduate (Master, Ph.D.)
    - 3 permanent account for each lab
  - Undergrate
    - 1 temporary account available for 1 year
  - Others
    - 1 temporary account available during the class

Conda Usage

- Ref: https://docs.conda.io/en/latest/
- Create a virtual environment
  - `conda create -n <env_name> python=3`
- Activate the virtual environment
  - `source activate <env_name>`
- Install a package
  - `pip install <package_name>`
  - `conda install <package_name>`
- Dectivate the virtual environment
  - `source deactivate`

SSH Client

- Windows: PieTTY
  - https://sites.google.com/view/pietty-project
- Linux
  - Example:
    ```
    $ ssh -p 2222 username@140.123.97.173
    ```

GPU Utilization

```
$ nvidia-smi
```

Example

```
maniac@gslave01[12:46:54]~$ nvidia-smi
Tue Apr 16 12:46:58 2019
+-----------------------------------------------------------------------------+
| NVIDIA-SMI 384.81                 Driver Version: 384.81                    |
|-------------------------------+----------------------+----------------------+
| GPU  Name        Persistence-M| Bus-Id        Disp.A | Volatile Uncorr. ECC |
| Fan  Temp  Perf  Pwr:Usage/Cap|         Memory-Usage | GPU-Util  Compute M. |
|===============================+======================+======================|
|   0  Tesla K80           On   | 00000000:05:00.0 Off |                    0 |
| N/A   89C    P0   111W / 120W |   9888MiB / 11439MiB |     92%      Default |
+-------------------------------+----------------------+----------------------+
|   1  Tesla K80           On   | 00000000:06:00.0 Off |                    0 |
| N/A   52C    P0   105W / 120W |  10699MiB / 11439MiB |     82%      Default |
+-------------------------------+----------------------+----------------------+
```

GPU Overview

- NVIDIA Tesla K80
- Total 12 GPU
- ~12 GB Memory for each GPU
- Rules
  - Only 1 GPU per user

Q&A