数字媒体处理 第四次实验 第20小组

TensorFlow 运行环境搭建

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实验过程

本次实验,我们小组在课程提供的云平台中,完成环境搭建,服务器无法连接公网,且西电 linux 开源社区无 Anaconda 镜像的问题,我们小组通过安装 proxychain 软件,在校内自己的计算机上搭建代理服务器,为云平台中的虚拟机提供网络代理的方式解决。

1. 修改内网 ip 地址, 更新软件源

```
## This software is not part of Ubuntu, but is offered by third-party
## developers who want to ship their latest software.
# deb http://extras.ubuntu.com/ubuntu trusty main
# deb-src http://extras.ubuntu.com/ubuntu trusty main

deb http://linux.xidian.edu.cn/mirrors/ubuntu/ trusty main restricted universe multiverse

deb http://linux.xidian.edu.cn/mirrors/ubuntu/ trusty-security main restricted universe multiverse

deb http://linux.xidian.edu.cn/mirrors/ubuntu/ trusty_updates main restricted universe multiverse

-- INSERT -- 68.54 Bot
```

# i-000002F0 [10.168.56.69] media20 - Google Chrome	- C]	×
▲ 不安全 https://10.168.60.10:9876/vnc_auto.html?vmlD==i-000002F0==4DC208C9==zh_CN==2367	6A901	08D	5
* Stopping Sena an event to indicate pigmouth is up * Stopping userspace bootsplash * Stopping cold plug devices * Stopping log initial device creation * Starting configure network device security * Starting Mount network filesystems * Starting Samba Winbind * Starting configure network device * Stopping Failsafe Boot Delay * Starting System V initialisation compatibility * Stopping Mount network filesystems * Starting configure virtual network devices * Starting NetBIOS name server Skipping profile in /etc/apparmor.d/disable: usr.sbin.rsyslogd		OK OK OK OK OK OK OK OK	
* Starting AppArmor profiles * Stopping System V initialisation compatibility * Starting System V runlevel compatibility * Starting deferred execution scheduler * Starting regular background program processing daemon * Starting dovecot - pop3/imap mail server * Starting dovecot - pop3/imap mail server * Starting OpenSSH server * Starting OpenSSH server * Stopping save kernel messages * Starting KVM * Starting automatic crash report generation * Starting domain name service bind9	1 1 1 1 1	OK OK OK OK OK OK OK OK]]]]]]
* No PostgreSQL clusters exist; see "man pg_createcluster" * Starting ACPI daemon	ι	OK	1
* Restoring resolver state * Starting MySQL Server * Starting configure network device security * Starting configure network device * Starting libuirt daemon AH00557: apache2: apr_sockaddr_info_get() failed for media20]]]	OK OK OK OK	1 1 1
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, irective globally to suppress this message * * Starting Tomcat servlet engine tomcat? * Stopping System V runlevel compatibility		12 <i>1</i>	

```
PING 114.114.114.114 (114.114.114.114) 56(84) bytes of data.
                    --- 114.114.114.114 ping statistics ---
3 packets transmitted, 0 received, 100% packet loss, time 2014ms
       ubuntu@media20:~s sudo apt-get update
[sudo] password for ubuntu:
Ign http://linux.xidian.edu.cn trusty InRelease
Get:! http://linux.xidian.edu.cn trusty-security InRelease [65.9 kB]
Get:2 http://linux.xidian.edu.cn trusty-security InRelease [65.9 kB]
Get:3 http://linux.xidian.edu.cn trusty-updates InRelease [65.9 kB]
Get:3 http://linux.xidian.edu.cn trusty-security/maln amd64 Packages [830 kB]
Get:4 http://linux.xidian.edu.cn trusty-security/maln amd64 Packages [830 kB]
Get:5 http://linux.xidian.edu.cn trusty-security/maln amd64 Packages [14.2 kB]
Get:6 http://linux.xidian.edu.cn trusty-security/multiverse amd64 Packages [293 kB]
Get:7 http://linux.xidian.edu.cn trusty-security/multiverse amd64 Packages [4806 B]
Get:8 http://linux.xidian.edu.cn trusty-security/multiverse amd64 Packages [4806 B]
Get:9 http://linux.xidian.edu.cn trusty-security/multiverse 1386 Packages [276 kB]
Get:10 http://linux.xidian.edu.cn trusty-security/multiverse 1386 Packages [276 kB]
Get:11 http://linux.xidian.edu.cn trusty-security/multiverse 1386 Packages [276 kB]
Get:13 http://linux.xidian.edu.cn trusty-security/multiverse 1386 Packages [4969 B]
Get:14 http://linux.xidian.edu.cn trusty-security/multiverse Translation-en [456 kB]
Get:15 http://linux.xidian.edu.cn trusty-security/multiverse Translation-en [2564 B]
Get:16 http://linux.xidian.edu.cn trusty-security/multiverse Translation-en [656 kB]
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Get:19 http://linux.xidian.edu.cn trusty-updates/multiverse amd64 Packages [17.2 kB]
Get:21 http://linux.xidian.edu.cn trusty-updates/multiverse amd64 Packages [18.6 kB]
Get:22 http://linux.xidian.edu.cn trusty-updates/multiverse amd64 Packages [18.6 kB]
Get:22 http://linux.xidian.edu.cn trusty-updates/multiverse amd64 Packages [18.6 kB]
Get:25 http://linux.xidian.edu.cn trusty-updates/multive
Preparing to unpack .../kil-common_Na37.7-lubuntu8.l_all.deb ...
locals: Cannot set LC CTPPE to default locals: No such file or directory
locals: Cannot set LC CTPPE to default locals: No such file or directory
locals: Cannot set LC CALL to default locals: No such file or directory
locals: Cannot set LC ALL to default locals: No such file or directory
locals: Cannot set LC ALL to default locals: No such file or directory
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locals: Cannot set LC ALL to default locals: No such file or directory
locals: Cannot set LC ALL to default locals: No such file o
```

2. 通过代理的方式,联网下载 Anaconda 安装脚本

```
Setting up libopenvol.mesa:amd64 (10.1.3.0ubuntu0.6) ...
Setting up liboriveo3:amd64 (11.5.0.1.bubuntu0.1) ...
Setting up liboriveo3:amd64 (11.5.0.1.bubuntu0.6) ...
Setting up liboriveo3:amd64 (1.0.2ubuntu1) ...
Setting up liboriveo3:amd64 (1.10.2ubuntu1) ...
Setting up liboriseo3:amd64 (1.10.2ubuntu0.1.4.04.2) ...
Setting up liboriseo3:amd64 (1.10.2ubuntu0.1.4.2.2) ...
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [ OK ]
           DNS-response| repo.anaconda.com is 104.16.130.3
04.16.130.3
onnecting to repo.anaconda.com (repo.anaconda.com)|104.16.130.3|:443... |S-chain|-∞-10.170.20.237:2080-∞∞-104.16.130.3:443-∞∞-0K
         connected.
HTTP request sent, awaiting response... 200 OK
Length: 685906562 (654M) [application/x-sh]
Gaving to: 'Anaconda3-2019.03-Linux-x86_64.sh'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ] 528,448,232 2.38MB/s eta 72s
 locale: Cannot set LC_CTYPE to default locale: No such file or directory locale: Cannot set LC_MESSAGES to default locale: No such file or directory locale: Cannot set LC_ALL to default locale: No such file or directory

* Setting up X socket directories...

* Setting up X socket directories...

update-alternatives: using /usr/lib/x86 64-linux-gnu/libtxc_dxtn_s2tc.so.0 to provide /usr/lib/x86_64-linux-gnu/libtxc_dxtn.so (libtxc-dxtn-x86_64-linux-gnu) in auto mode Processing triggers for ureadahead (0.180.8-0.6) ...

Setting up libxssl:amd64 (1:1.2.2-1) ...

Setting up libxssl:amd64 (1:1.2.2-1) ...

Processing triggers for libc-bin (2.19-0ubuntu6.9) ...

ubuntu@media20:-$ proxychains wget https://repo.anaconda.com/archive/Anaconda3-2019.03-Linux-x86_64.sh

ProxyChains-3.1 (http://proxychains.sf.net)

--2019-05-13 19:44:48-- https://repo.anaconda.com/archive/Anaconda3-2019.03-Linux-x86_64.sh

Resolving repo.anaconda.com (repo.anaconda.com... | DNS-request| repo.anaconda.com

| S-chain| -->-10.170.20.237:2880-->-4.2.2.2:53-->-0K | DNS-response| repo.anaconda.com is 104.16.130.3 |

104.16.130.3 |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.237:2880-->-104.16.130.3 :443.->-0K |

Connecting to repo.anaconda.com (repo.anaconda.com)| 104.16.130.3 | :443... | S-chain| ->-10.170.20.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            [ OK ]
       connected.

ITTP request sent, awaiting response... 200 OK Length: 68596652 (654M) (application/x-sh)
Saving to: 'Anaconda3-2019.03-Linux-x86_64.sh'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ===>] 685,986,562 2.21MB/s in 5m 15s 1
       2019-05-13 19:50:06 (2.07 MB/s) - 'Anaconda3-2019.03-Linux-x86_64.sh' saved [685906562/685906562]
         buntumendi 218: found, did you mean:

Command 'tls' found, did you mean:

Command 'tls' from package 'python-tlslite' (universe)

Command 'sis' from package 'tsutils' (main)

Command 'ls' from package 'coreutils' (main)

Command 'als' from package 'sleuthkit' (universe)

Command 'als' from package 'speech-tools' (universe)

Command 'als' from package 'speech-tools' (universe)

Command 'ls' from package 'sleuthkit' (universe)

ls: command not found

buntumendi 20:-5 ls

ls: lsaconda3-2019.03-Linux-x86_64.sh

buntumendi 20:-5 ls
```

下载完成

3. 安装 Anaconda

```
Please answer 'yes' or 'no':'
>>> yes

Anaconda3 will now be installed into this location:
/home/ubuntu/anaconda3

- Press ENTER to confirm the location
- Press CTRL-C to abort the installation
- Or specify a different location below

[/home/ubuntu/anaconda3] >>>
PREFIX=/home/ubuntu/anaconda3
installing: python-3.7.3-h0371630_0 ...
```

```
installing: blas-1.0-mkl ...
installing: ca-certificates-2019.1.23-0 ...
installing: intel-openmp-2019.3-199 ...
installing: libgcc.ng.8.2.0-hdf63c60 1 ...
installing: libgrotran-ng-7.3.0-hdf63c60 6 ...
installing: libstdcxx.ng-8.2.0-hdf63c60 1 ...
installing: libstdcxx.ng-8.2.0-hdf63c60 1 ...
installing: sexpat-2.2.6-he671000 0 ...
installing: expat-2.2.6-he671000 0 ...
installing: graphite2-1.3.13-h23475e2 0 ...
installing: graphite2-1.3.13-h23475e2 0 ...
installing: graphite2-1.3.13-h23475e2 0 ...
installing: jbg-9.1-hdb28e3 6 ...
installing: jbg-9.1-hdb28e3 6 ...
installing: jbg-9.1-hdb28e3 7 ...
installing: jbg-1.1-hd88c755 4 ...
installing: libfi-3.2.1-hd88c755 4 ...
installing: libfi-3.2.1-hd88c755 4 ...
installing: libfi-3.2.1-hd88c755 4 ...
installing: libsodium-10.16-nlbed415 0 ...
installing: libouid-1.0.3-hbd6447c 5 ...
installing: libuuid-1.0.3-hbd6447c 5 ...
installing: libuuid-1.0.3-hbd64415 2 ...
installing: libuuid-1.0.3-hbd6415 2 ...
installing: libuuid-1.0.3-hbd6415 2 ...
installing: libuuid-1.0.3-hbd6415 2 ...
installing: pcre-8.43-he671000 1 ...
installing: pcre-8.43-he671000 3 ...
installing: px-5.4.4-h41c3975 4 ...
installing: snappy-1.1.7-hbae8bb6 3 ...
installing: ymxn-0.38.0-h7b6447c 0 ...
installing: ymxn-0.38.0-h7b6447c 1 ...
installing: ymxn-0.38.0-h7b6447c 3 ...
installing: ymxn-0.38.0-h7b6447c 3 ...
installing: ymxn-0.38.0-h7b6447c 3 ...
installing: ymxn-0.38.0-h7b6447c 3 ...
installing: libosc-1.15.0-h4680876 0 ...
installing: plosc-1.15.0-h4680876 0 ...
installing: libosc-1.15.0-h4680876 0 ...
installing: libosc-1.15.0-h4680876 0 ...
installing: plosc-1.15.0-h4680876 0 ...
installin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \mathbb{I}
installing: scikit-image-0.14.2-py37he6710b0_0 ...
installing: scikit-learn-0.20.3-py37he8710b0_0 ...
installing: satropy-3.1.2-py37hb8447_0 ...
installing: satropy-3.1.2-py37hb8447_0 ...
installing: seaborn-0.9.0-py37_0 ...
installing: seaborn-0.9.0-py37_0 ...
installing: seaborn-0.9.0-py37_0 ...
installing: anaconda-2019.03-py37_0 ...
installing: anaconda-2019.03-py37_0 ...
installing: anaconda-2019.03-py37_0 ...
installing: conda init? [yes|no]
[no] >>> yes
WARNINO: The conda.compat module is deprecated and will be removed in a future release.
No change
no 
                              -> For changes to take effect, close and re-open your current shell. <==
      If you'd prefer that conda's base environment not be activated on startup,
   set the auto_activate_base parameter to false:
                    conda config --set auto_activate_base false
             Thank you for installing Anaconda3!
```

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4. 安装 TensorFlow

PyCharm for Anaconda is available at: https://www.anaconda.com/pycharm

ubuntu@media20:~\$

Anaconda and JetBrains are working together to bring you Anaconda-powered environments tightly integrated in the PyCharm IDE.

```
protobuf-3.7.1 | py37heG1080 0 650 KB tensortoard-1.13.1 | py37heG1080 0 100.7 MB tensortoard-1.14 | py37heG1080 0 100.7 MB tensortoard-1.15.1 | py37heG1080 0 1
```

5. 执行脚本,输出结果

```
OMP: Into #1/1: MMP_AFFINITY: US proc 0 maps to package 0
OMP: Info #250: KMP_AFFINITY: pid 4501 tid 4501 thread 0 bound 1
2019-05-13 20:03:54.762534: I tensorflow/core/common_runtime/pro
t performance.
o'Hello, media20!!!'
(base) ubuntu@media20:~$
```