

# VE482 Lab 3 Report

## The `rsync` command

- In Minix 3 install the `rsync` software

```
pkgin install rsync
```

- Install `rsync` on your Linux system

```
sudo apt install rsync
```

- Read `rsync` manpage

```
man rsync
```

- Create an exact copy of the directory `/usr/src` into the directory `/usr/src_orig`

```
rsync -av /usr/src/ /usr/src_orig
```

- If you have already altered Minix 3 source code for homework 2 undo your changes from `/usr/src_orig`

```
rsync -av /usr/src_orig/ /usr/src
```

- Create an exact copy of the Minix 3 directory `/usr/src` into your Linux system, using `rsync` and `ssh` (note that the `ssh` server must be activated under Linux)

```
rsync -av minix:/usr/src/ ~/Desktop/VE482/src_orig
```

## The `diff` and `patch` commands

- Read the manpages of `diff` and `patch`

```
man diff  
man patch
```

- Using the `diff` command, create a patch corresponding to the above changes

```
diff -u /usr/src_orig /usr/src > patch
```

- Retrieve your patch on your Linux system

```
rsync minix:/usr/patch ~/Desktop/VE482
```

- Apply your patch to the copy of `/usr/src_orig` on your Linux system

```
cd ~/Desktop/VE482
patch -p2 < patch
```

- Revert the patch

```
patch -p2 -RE < patch
```

## Basic git usage

主要

远程

### 基础篇

循序渐进地介绍 Git 主要命令

1: *Git Commit*

✓

✓

✓

✓

### 高级篇

要开始介绍 Git 的超棒特性了，快来吧！

1: *分离 HEAD*

✓

✓

✓

✓

### 移动提交记录

自由修改提交树

1: *Git Cherry-pick*

✓

✓

### 杂项

Git 技术、技巧与贴士大集合

1: *只取一个提交记录*

✓

✓

✓

✓

✓

### 高级话题

只为真正的勇士！

1: *多次 Rebase*

✓

✓

✓

主要

远程

### Push & Pull — Git 远程仓库！

是时候分享你的代码了，让编码变得社交化吧

6: *Git Push*

✓

✓

✓

✓

✓

✓

✓

✓

### 关于 origin 和它的周边 — Git 远程仓库高级操作

做一名仁慈的独裁者一定会很有趣——

1: *推送主分支*

✓

✓

✓

✓

✓

✓

✓

✓

## Scripting and regular expressions

- Using `curl` or `wget` retrieve information on shanghai air quality and pipe it to `sed` which should parse the output in order to display the information in the terminal following the format below:  
AQ: value Temp: value °C (e.g. AQ: 55 Temp: 24 °C).

```
wget -O - "http://aqicn.org/?city=Shanghai&widgetscript&size=large&id=52b39d71decf07.20261781" | sed 's/<[^>]*>//g; s/v[""]*"//g; s/ Shanghai Air Quality./AQ: /g; s/[GMUVH].*Temp. / Temp: /g; s/"./°C/g; 2,3d'
```

```
lanwang@ubuntu:~/Desktop/VE482$ wget -O - "http://aqicn.org/?city=Shanghai&widgetscript&size=large&id=52b39d71decf07.20261781" | sed 's/<[^>]*>//g; s/v[""]*"//g; s/ Shanghai Air Quality./AQ: /g; s/[GMUVH].*Temp. / Temp: /g; s/"./°C/g; 2,3d'
--2021-10-04 09:36:36-- http://aqicn.org/?city=Shanghai&widgetscript&size=large&id=52b39d71decf07.20261781
Resolving aqicn.org (aqicn.org)... 172.105.192.79
Connecting to aqicn.org (aqicn.org)|172.105.192.79|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [application/javascript]
Saving to: 'STDOUT'

- [ <=> ] 10.62K --.-KB/s in 0.001s

2021-10-04 09:36:36 (9.30 MB/s) - written to stdout [10871]

AQ: 55 Temp: 25 °C
```

- Pipelining the output of `ifconfig` to `awk` return only the ip address of your current active network connection (the active network interface can be passed to `ifconfig`).

```
ifconfig | awk '/inet / {print $0}' | awk -F' +' '{print $3}'
```

```
lanwang@ubuntu:~/Desktop/VE482$ ifconfig | awk '/inet / {print $0}' | awk -F' +' '{print $3}'
192.168.255.129
127.0.0.1
```