

GitHub 搭建 repo 服务器

(以维护 NXP 官方 BSP 为例)

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一、客户端：

下载 repo 脚本以及相关环境：配置 git: (略)

```
$ mkdir ~/bin

$ curl https://mirrors.tuna.tsinghua.edu.cn/git/git-repo -o ~/bin/repo

$ chmod +x ~/bin/repo

$ vi ~/.bashrc

$ source ~/.bashrc

$ sudo apt-get install python3
```

在 ~/.bashrc 最后一行加入： `export PATH=~/bin:$PATH`

由于网络原因，如果使用国内网络，建议将 ~/bin/repo 中的 URL 替换一下：

```
修改： REPO_URL = 'https://gerrit.googlesource.com/git-repo'

为： REPO_URL = 'https://mirrors.tuna.tsinghua.edu.cn/git/git-repo/'
```

下载 NXP 的 BSP 工程

```
$ cd

$ mkdir NXP-BSP && cd NXP-BSP

$ repo init -u https://github.com/nxp-imx/imx-manifest -b imx-linux-kirkstone -m imx-5.15.52-2.1.0.xml

$ repo sync
```

```
adv@baf124e5d368:~/NXP-BSP$
adv@baf124e5d368:~/NXP-BSP$
adv@baf124e5d368:~/NXP-BSP$ repo init -u https://github.com/nxp-imx/imx-manifest -b imx-linux-kirkstone -m imx-5.15.52-2.1.0.xml
Downloading Repo source from https://gerrit.googlesource.com/git-repo
remote: Counting objects: 13, done
remote: Finding sources: 100% (1/1)
remote: Total 1 (delta 0), reused 1 (delta 0)
Unpacking objects: 100% (1/1), done.

Your identity is: caokl <caokl@jwele.com.cn>
If you want to change this, please re-run 'repo init' with --config-name

repo has been initialized in /home/adv/NXP-BSP
adv@baf124e5d368:~/NXP-BSP$ repo sync
remote: Enumerating objects: 1055, done.
remote: Counting objects: 100% (1055/1055), done.
remote: Compressing objects: 100% (485/485), done.
remote: Total 1007 (delta 603), reused 904 (delta 512), pack-reused 0
Receiving objects: 100% (1007/1007), 314.63 KiB | 235.00 KiB/s, done.
Resolving deltas: 100% (603/603), completed with 27 local objects.
Fetching: 92% (12/13) meta-virtualization
Fetching: 100% (13/13), done in 5m4.045s
Garbage collecting: 100% (13/13), done in 0.044s
Checking out: 100% (13/13), done in 0.711s
repo sync has finished successfully.
adv@baf124e5d368:~/NXP-BSP$
adv@baf124e5d368:~/NXP-BSP$
```

此过程可能由于网络原因，中途可能会等待很久，甚至报错；多尝试几次。

这时在\$ NXP-BSP 目录下会有一个隐藏的目录.repo。将~/NXP-BSP/.repo/manifests/下的imx-5.15.52-2.1.0.xml 拷贝出来备用,并删除工程中的所有 git 仓库

```
$ cd ~/NXP-BSP/

$ cp ~/NXP-BSP/.repo/manifests/imx-5.15.52-2.1.0.xml ~/NXP-BSP/default.xml

$ find . -name ".git" | xargs rm -rf
```

拉取 manifest 空仓（在此之前需在 GitHub 上新建一个 manifest.git 仓库，跳到后面看）

```
$ cd ~/NXP-BSP/

$ git clone https://github.com/CKL2022/manifest.git

$ mv ~/NXP-BSP/default.xml ~/NXP-BSP/manifest/
```

修改（或者自己编写）default.xml

使用 [del version.py](#) 脚本删除一些版本信息

```
$ cd ~/NXP-BSP/manifest/

$ scp del_version.py .

$ chmod +x del_version.py

$ ./del_version.py default.xml

$ vi default.xml
```

将 default.xml 修改为新的服务器地址(根据实际要存放代码的路径)，分支改成 master

```
<remote fetch="https://github.com/CKL2022/" name="CKL2022"/>

<default revision="master" remote="CKL2022" />
```

其他参数根据情况修改（因为远程和本地的目录名，部分名字没有统一）

即：GitHub 远程仓库的名字，本地下载的目录名字，以及 XML 文件的描述名字要对应得上

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <manifest>
3
4     <remote fetch="https://github.com/CKL2022/" name="CKL2022"/>
5     <default revision="master" remote="CKL2022" />
6
7
8
9
10    <project name="fsl-community-bsp-base" path="sources/base">
11        <linkfile dest="README" src="README"/>
12        <linkfile dest="setup-environment" src="setup-environment"/>
13    </project>
14    <project name="meta-browser" path="sources/meta-browser"/>
15    <project name="meta-clang" path="sources/meta-clang"/>
16    <project name="meta-freescale" path="sources/meta-freescale"/>
17    <project name="meta-freescale-3rdparty" path="sources/meta-freescale-3rdparty"/>
18    <project name="meta-freescale-distro" path="sources/meta-freescale-distro"/>
19
20    <project name="meta-imx" path="sources/meta-imx">
21        <linkfile dest="imx-setup-release.sh" src="tools/imx-setup-release.sh"/>
22        <linkfile dest="README-IMXBSP" src="README"/>
23    </project>
24
25    <project name="meta-nxp-demo-experience" path="sources/meta-nxp-demo-experience"/>
26    <project name="meta-openembedded" path="sources/meta-openembedded"/>
27    <project name="meta-qt6" path="sources/meta-qt6"/>
28    <project name="meta-timesys" path="sources/meta-timesys"/>
29    <project name="meta-virtualization" path="sources/meta-virtualization"/>
30    <project name="poky" path="sources/poky"/>
31 </manifest>
```

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修改完成后，将客户端 manifest 中的 default.xml 推送到 repo 服务器端

```
$ cd ~/NXP-BSP/manifest

$ rm del_version.py

$ git add .

$ git commit -am "add default.xml"

$ git push -u origin master:master
```

账户是 GitHub 上的登录账户；密码不是用登录密码，而是 **token**（不需要公钥即可申请）

```
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/manifest$ git add .
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/manifest$ git commit -am "add default.xml"
[master (root-commit) 7e48282] add default.xml
 2 files changed, 78 insertions(+)
 create mode 100644 default.xml
 create mode 100755 del_version.py
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/manifest$ ls
default.xml  del_version.py
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/manifest$ git push -u origin master:master
Username for 'https://github.com': CKL2022
Password for 'https://CKL2022@github.com':
```

在 GitHub 上建立 BSP 工程各个项目空仓（类比 manifest 空仓操作）

```
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/sources$ ls -ll
total 52
drwxrwxr-x  3 ckl ckl 4096 10月 29 15:17 base
drwxrwxr-x  4 ckl ckl 4096 10月 29 15:17 meta-browser
drwxrwxr-x 14 ckl ckl 4096 10月 29 15:17 meta-clang
drwxrwxr-x 23 ckl ckl 4096 10月 29 15:17 meta-freescale
drwxrwxr-x 10 ckl ckl 4096 10月 29 15:17 meta-freescale-3rdparty
drwxrwxr-x  8 ckl ckl 4096 10月 29 15:17 meta-freescale-distro
drwxrwxr-x  8 ckl ckl 4096 10月 29 15:17 meta-imx
drwxrwxr-x  5 ckl ckl 4096 10月 29 15:17 meta-nxp-demo-experience
drwxrwxr-x 13 ckl ckl 4096 10月 29 15:17 meta-openembedded
drwxrwxr-x  8 ckl ckl 4096 10月 29 15:17 meta-qt6
drwxrwxr-x  5 ckl ckl 4096 10月 29 15:17 meta-timesys
drwxrwxr-x 18 ckl ckl 4096 10月 29 15:17 meta-virtualization
drwxrwxr-x 11 ckl ckl 4096 10月 29 15:17 poky
ckl@ubt20:~/workspace/REP0/NXP-BSP/NXP-BSP/sources$
```

poky (Public)

poky.git

Updated now

☆ Star

meta-virtualization (Public)

meta-virtualization

Updated 19 seconds ago

☆ Star

meta-timesys (Public)

meta-timesys.git

Updated 29 seconds ago

☆ Star

meta-qt6 (Public)

meta-qt6.git

Updated 42 seconds ago

☆ Star

meta-openembedded (Public)

meta-openembedded.git

Updated 1 minute ago

☆ Star

同时，本地代码各个模块重新建立 git，并连接到 GitHub 各自对应的仓库。

```
$ cd base/ && git init

$ git add .

$ git commit -am "base git init "

$ git remote add origin https://github.com/CKL2022/base.git

$ git push -u origin master:master
```

要注意仓库命名，要么以蓝色框命名远程仓；要么修改蓝色框内容（本人修改的 xml 文件）
[name 一栏是远程仓的目录 path 是本地的目录]

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <manifest>
3
4     <remote fetch="https://github.com/CKL2022/" name="CKL2022"/>
5     <default revision="master" remote="CKL2022" />
6
7
8
9
10 <project name="fsl-community-bsp-base" path="sources/base">
11     <linkfile dest="README" src="README"/>
12     <linkfile dest="setup-environment" src="setup-environment"/>
13 </project>
14 <project name="meta-browser" path="sources/meta-browser"/>
15 <project name="meta-clang" path="sources/meta-clang"/>
16 <project name="meta-freescale" path="sources/meta-freescale"/>
17 <project name="meta-freescale-3rdparty" path="sources/meta-freescale-3rdparty"/>
18 <project name="meta-freescale-distro" path="sources/meta-freescale-distro"/>
19
20 <project name="meta-imx" path="sources/meta-imx">
21     <linkfile dest="imx-setup-release.sh" src="tools/imx-setup-release.sh"/>
22     <linkfile dest="README-IMXBSP" src="README"/>
23 </project>
24
25 <project name="meta-nxp-demo-experience" path="sources/meta-nxp-demo-experience"/>
26 <project name="meta-openembedded" path="sources/meta-openembedded"/>
27 <project name="meta-qt6" path="sources/meta-qt6"/>
28 <project name="meta-timesys" path="sources/meta-timesys"/>
29 <project name="meta-virtualization" path="sources/meta-virtualization"/>
30 <project name="poky" path="sources/poky"/>
31 </manifest>
```

修改完如下：

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <manifest>
3
4     <remote fetch="https://github.com/CKL2022/" name="CKL2022"/>
5     <default revision="master" remote="CKL2022" />
6
7
8
9
10 <project name="base" path="sources/base">
11     <linkfile dest="README" src="README"/>
12     <linkfile dest="setup-environment" src="setup-environment"/>
13 </project>
14 <project name="meta-browser" path="sources/meta-browser"/>
15 <project name="meta-clang" path="sources/meta-clang"/>
16 <project name="meta-freescale" path="sources/meta-freescale"/>
17 <project name="meta-freescale-3rdparty" path="sources/meta-freescale-3rdparty"/>
18 <project name="meta-freescale-distro" path="sources/meta-freescale-distro"/>
19
20 <project name="meta-imx" path="sources/meta-imx">
21     <linkfile dest="imx-setup-release.sh" src="tools/imx-setup-release.sh"/>
22     <linkfile dest="README-IMXBSP" src="README"/>
23 </project>
24
25 <project name="meta-nxp-demo-experience" path="sources/meta-nxp-demo-experience"/>
26 <project name="meta-openembedded" path="sources/meta-openembedded"/>
27 <project name="meta-qt6" path="sources/meta-qt6"/>
28 <project name="meta-timesys" path="sources/meta-timesys"/>
29 <project name="meta-virtualization" path="sources/meta-virtualization"/>
30 <project name="poky" path="sources/poky"/>
31 </manifest>
```

输入账户和 token 即可（其他目录类似）

用户：CKL2022 token：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

三、GitHub 端建立空仓库

Overview

Repositories 2

Projects

Packages

Stars

Find a repository...

Type

Language

Sort

New

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

Owner *

Repository name *

CKL2022

/

manifest

Great repository names are short and memorable. Need inspiration? How about [reimagined-octo-tribble?](#)

Description (optional)

manifest.git

☒ Public

Anyone on the internet can see this repository. You choose who can commit.

☐ Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☐ Add a README file

This is where you can write a long description for your project. [Learn more.](#)

Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None

Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)

License: None

You are creating a public repository in your personal account.

Create repository

Quick setup — if you've done this kind of thing before

Set up in Desktop

 or

HTTPS

SSH

https://github.com/CKL2022/manifest.git

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# manifest" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/CKL2022/manifest.git
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin https://github.com/CKL2022/manifest.git
git branch -M main
git push -u origin main
```

四、验证

在客户端新建一个目录：

```
$ cd ~/NXP
```

```
$ repo init -u https://github.com/CKL2022/manifest.git -b master -m default.xml
```

```
$ repo sync
```

```
ljc@ljc-H3C-server:/extend_sda/kangle/test$ rm sources/ -rf
ljc@ljc-H3C-server:/extend_sda/kangle/test$
ljc@ljc-H3C-server:/extend_sda/kangle/test$
ljc@ljc-H3C-server:/extend_sda/kangle/test$ repo init -u https://github.com/CKL2022/manifest.git -b master -m default.xml
Downloading Repo source from https://gerrit.googlesource.com/git-repo
... A new version of repo (2.29) is available.
... You should upgrade soon:
    cp /extend_sda/kangle/test/.repo/repo/repo /home/ljc/bin/repo

Your identity is: ljc <ljc@jwele.com.cn>
If you want to change this, please re-run 'repo init' with --config-name

repo has been initialized in /extend_sda/kangle/test
ljc@ljc-H3C-server:/extend_sda/kangle/test$
ljc@ljc-H3C-server:/extend_sda/kangle/test$
ljc@ljc-H3C-server:/extend_sda/kangle/test$ repo sync
... A new version of repo (2.29) is available.
... You should upgrade soon:
    cp /extend_sda/kangle/test/.repo/repo/repo /home/ljc/bin/repo

Fetching: 100% (13/13), done in 32.721s
Garbage collecting: 100% (13/13), done in 0.086s
repo sync has finished successfully.
ljc@ljc-H3C-server:/extend_sda/kangle/test$
```

