

DVC User Guide

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Agenda

DVC 架构

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Problem : Unmanaged Data Location

- Everyone has their own style

Individual
Project:

- /projusers/d2ak301af01/20230315/01_syn/03_dct_by_def/NETLIST/syn_pass2.v
- /projusers/d2nk305af03/data/20230502_1st_trial/netlist/TOP22100.v

Same
Project:

- /projusers/d2nh311af03/PACH_SUB_A/APR/FE/DATA_0901/
4_1_EcoRouteShort_0901v3.enc.dat/SUB_A.v.gz
- /projusers/d2nh311ad01/DFT/02_Pre_layout/
03_JTAG_DDR_DC_spec/06_testchip.v/

I can't find his
design data



I used old version of
design data!!



Project Account Rule

- Project account with S/N

- <project_code>xxx

(x: 小写英文字母或数字皆可)

x: role code,一般为英文字母

- a: global account for project leader
(project code的目录之owner, project code的目录, 用来摆放此project的tech-lib files与各member所release的设计 data)
 - b: BE member
 - c: CAD member
 - d: DFT member
 - f: FE member
 - l: Layout member
 - s: Circuit member
 - v: Verification member

x: member code,一般为数字若不够用
再以英文字母编码使用 (ex. 0~9, a~z)

Ex. d2ak301ab01

- xx: member code

00: 是特别的数字代表是Lead, 而其他编号则代表member

例如:

d2ak301aa00 : 此账号是project lead使用

d2ak301al00 : 此账号是layout lead使用

d2ak301as00 : 此账号是circuit lead使用

d2ak301av00 : 此账号是verification lead使用

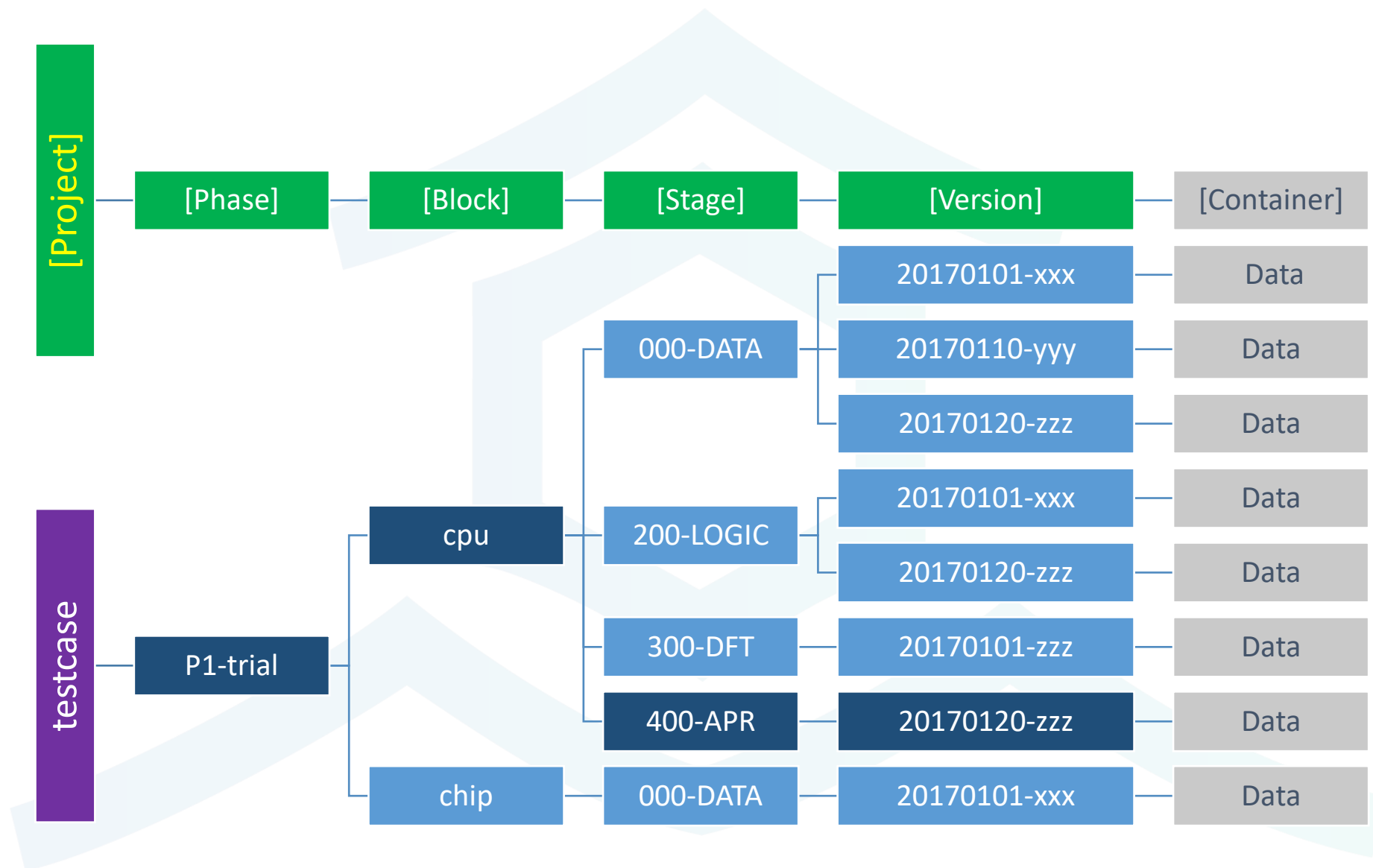
Account跟Group的关系:

Account	Group
d2ak301aa00	d2ak301a, d2ak301aa
d2ak301as00	d2ak301a, d2ak301as
d2ak301as01	d2ak301a, d2ak301as
d2ak301ac00	d2ak301a, d2ak301ac
d2ak301ac01	d2ak301a, d2ak301ac
d2ak301al00	d2ak301a, d2ak301al



DVC 架构

Design Version Control Directory Hierarchy



Design Phase Name

- **Phase Name (defined by project manager)**
- 在建立DVC version path时, 请遵照下表所列指定适合的Phase层名字

Phase
P1-trial
P2-stable
P3-final
P4-tapeout

Design Block Name

■ Block Name (defined by design manager)

Ex.

chip, cpu, gpu, ddr, sub1, ...

Design Stage Name

■ **Design Stage Name (defined based on tool execution flow)**

■ 在建立DVC version path时, 请参考下表所列指定适合的Stage层名字

Stage	
000-DATA	500-TIMING
100-CIRCUIT	600-POWER
200-LOGIC	700-TAPEOUT
300-DFT	800-TESTING
400-APR	900-PACKAGE

Ps: Stage defined based on tool execution flow

- Stage是design进行的milestone, team leader可在你所属的stage下制定多个sub-stage: ex. 310_MBIST 以方便管理实作进度
- 000_DATA stage: customer给的design data可放在此stage之version底下



Stage Version Name

- **Version Name** (defined by designer, recommend to follow the same convention)
- DVC version path的第四层为stage的version, 其格式为

<DBSRC_DATE>_<REMARK>
170910_ftp
170910_scan
170910_apr
170910_eco

你也可以定义的更为详细

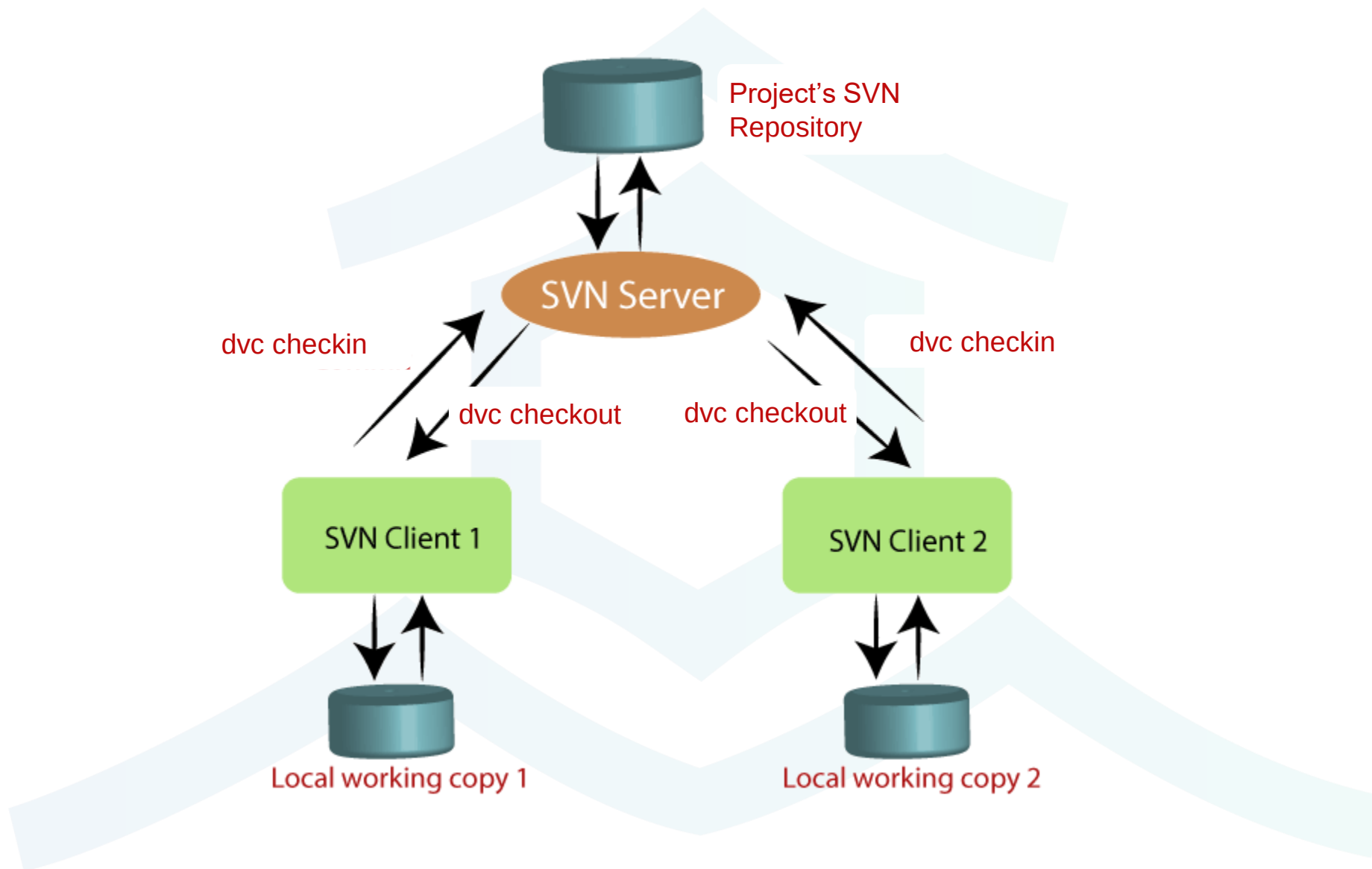
例如: <customer's_netlist_in_date>_<purpose>_<sub_version>

Ex. 20241125_apr_v1
20241125_eco_v2

<customer's_netlist_in_date>:
这部分,请直接照抄上家的

<purpose>与<sub_version>:
这部分没有要求特定格式,你可
按自己需求填写得更为详细

DVC SVN 关系图



DVC Wrapper Command

项目使用前准备 (a00帐号 Only)

- 在项目一开始时,请务必使用该项目a00帐号(ex. d1tl409aa00) 执行以下命令,以建立该项目的DVC之svn环境

```
> source /lyg/projects/<project_code>/cshrc_dop  
> dvc project setup
```

接着你可以在/projects/<project_code>/之下, 看到svn/ folder
此文件夹为svn repository所在, 请勿做任何更动

```
twcad03:/projects/d1tl409a> ls -la  
total 20  
drwxr-xr-x 5 d1tl409aa00 d1tl409a 4096 Aug  8 20:13 .  
drwxr-xr-x 3 root        root    4096 Jul 30 17:06 ..  
drwxr-xr-x 4 d1tl409aa00 d1tl409a 4096 Jul 30 20:28 dfa  
drwxr-x--- 3 d1tl409aa00 d1tl409a 4096 Aug  8 20:13 .dop  
drwxr-x--- 4 d1tl409aa00 d1tl409a 4096 Aug  8 20:13 svn
```

- 在运行任何 DVC 命令之前，确保已设置 `DVC\_WORKING` 环境变量。
如果未设置，脚本将自动将其设置为 `\$HOME/DVC`。

Ex. `setenv DVC_WORKING ~/myDesignData/DVC`

■ 本指南概述了 DVC 命令行工具，解释了可用命令、使用方法和示例

■ dvc 脚本支持以下主要命令：

1. project [setup|checkout]
2. folder [create|checkout|remove]
3. object [copy|link]
4. dvcpath [checkin|confirmlist|confirminfo|confirm]
5. --help

■ project:

- 用法: `dvc project setup`, `dvc project checkout`
- 描述: 与项目相关的命令，用于设置或检出项目。

■ folder:

- 用法: `dvc folder create <path>`, `dvc folder checkout <path>`
`dvc folder remove <path>`
- 描述: 与文件夹相关的命令，用于创建,检出或移除文件夹。

对象和 DVC 路径

■ object:

- 用法: `dvc object copy <source_path> <dest_name>`, `dvc object link <source_path> <dest_name>`
- 描述: 与对象相关的命令，用于复制或链接对象。

■ dvcpath checkin :

- 用法: `dvc dvcpath checkin <path>`, `dvc dvcpath confirmlist`, `dvc dvcpath confirminfo <path>`, `dvc dvcpath confirm <path>`
- 描述: 检入指定路径下的内容到 SVN。

■ dvcpath confirmlist | confirminfo | confirm

- 用法: `dvc dvcpath confirmlist`, `dvc dvcpath confirminfo <path>`, `dvc dvcpath confirm <path>`
- 描述: 确认指定路径下的内容是ok的，可让其他成员checkout出来使用。

示例

■ 设置项目:

- dvc project setup

■ 创建文件夹:

- dvc folder create phase/block/stage/version

■ 复制或链接对象:

- dvc object copy /path/to/source /dest/name

- dvc object link /path/to/source /dest/name

■ 检入路径:

- dvc dvcpath checkin phase/block/stage/version



实例操作 d1tl409a

环境设置: Setup DVC Svn (a00账号 Only)



■在项目一开始时,请使用该项目帐号 d1tl409aa00, source DOP环境

> source /lyg/projects/d1tl409a/cshrc_dop

■执行以下命令,以建立该项目的DVC之svn环境

> dvc project setup

接着你可以在/projects/d1tl409a/之下, 看到svn/ folder
此文件夹为svn repository所在, 请勿做任何更动

```
twcad03:/projects/d1tl409a> ls -la
total 20
drwxr-xr-x 5 d1tl409aa00 d1tl409a 4096 Aug 14 15:49 .
drwxr-xr-x 3 root      root      4096 Jul 30 17:06 ..
lrwxrwxrwx 1 d1tl409aa00 d1tl409a  31 Aug 14 15:49 cshrc_dop -> dop/dop_v1.0.20240814/cshrc_dop
drwxr-x--- 4 d1tl409aa00 d1tl409a 4096 Aug 14 11:37 dop
drwxr-x--- 3 d1tl409aa00 d1tl409a 4096 Aug  8 20:13 .dop
drwxr-x--- 4 d1tl409aa00 d1tl409a 4096 Aug  8 20:13 svn
```



实例操作 d1tl409a Release Design Data

成员: Checkout 工作文件夹

■ `source /lyg/projects/d1tl409a/cshrc_dop`

■ 使用DVC之前, 你需要Checkout出工作文件夹 (working space)

□ 第一步请设定环境变量: `DVC_WORKING`, 来指定你DVC的工作文件夹路径
往后你所有的DVC Wrapper Command都是对此DVC_WORKING文件夹操作

- 若你需产生不同的DVC工作文件夹, 你可以藉由修改DVC_WORKING, 再做一次 `dvc project checkout`
- 若你需切换不同的DVC工作文件夹, 你也可以藉由修改DVC_WORKING, 再来做后续的操作

建议你可以把它写在.cshrc内

ex. `> setenv DVC_WORKING /projusers/d1tl409af01/DVC`

□ 以项目代码: d1tl409a, Checkout出工作文件夹

Ex. `dvc project checkout`

```
twcad03:/projusers/d1tl409af01> dvc project checkout
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409af01/DVC
Checking out project
=====
TIME: @20240814_164323 BEGIN dvc_checkout_project d1tl409a /projusers/d1tl409af01/DVC
SETP: DESIGN_PROJT = d1tl409a
INFO: Checkout Project Design Respository : d1tl409a
SETP: PROJT_PATH = /projusers/d1tl409af01/DVC
Checked out revision 40.
TIME: @20240814_164324 END dvc_checkout_project
=====
twcad03:/projusers/d1tl409af01> ls
DVC
```

成员: 建立Stage Version



■ 当你完成工作产生出新的design data以及DQI report, 你需要在DVC内建立你的Stage Version, 以便release它们给你的下家

ex. > dvc folder create \ P1-trial/block1/200-LOGIC/20240501_release_v1

此时该stage version已在svn内建立
接着你该把它checkout到你的working space

```
twcad03:/projusers/dt1l409af01> dvc folder create P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: ./projusers/dt1l409af01/DVC
Creating folder: P1-trial/block1/200-LOGIC/20240501_release_v1
=====
TIME: @20240816_140627 BEGIN dvc_create_folder P1-trial/block1/200-LOGIC/20240501_release_v1
INFO: DVC_VERSION = 2020_1115a
INFO: DVC_PATH = P1-trial/block1/200-LOGIC/20240501_release_v1
=====
TIME: @20240816_140627 BEGIN 21_create_phase.csh P1-trial
INFO: DVC_VERSION = 2020_1115a
SETP: DESIGN_PHASE = P1-trial
INFO: Create Project Design Phase : P1-trial
TIME: @20240816_140627 END 21_create_phase.csh
=====
TIME: @20240816_140627 BEGIN 22_create_block.csh block1
INFO: DVC_VERSION = 2020_1115a
SETP: DESIGN_BLOCK = block1
INFO: Create Project Design Block : block1
TIME: @20240816_140627 END 22_create_block.csh
=====
TIME: @20240816_140627 BEGIN 23_create_stage.csh 200-LOGIC
INFO: DVC_VERSION = 2020_1115a
SETP: DESIGN_STAGE = 200-LOGIC
INFO: Create Project Design Stage : 200-LOGIC
TIME: @20240816_140627 END 23_create_stage.csh
=====
TIME: @20240816_140627 BEGIN 24_create_version.csh 20240501_release_v1
INFO: DVC_VERSION = 2020_1115a
SETP: DESIGN_VERSN = 20240501_release_v1
INFO: Create Project Design Version : 20240501_release_v1
TIME: @20240816_140628 END 24_create_version.csh
=====
TIME: @20240816_140628 END dvc_create_folder
twcad03:/projusers/dt1l409af01> tree
└── DVC
```

成员: Checkout Stage Version



■Checkout你的Stage Version:

ex. > dvc folder checkout P1-trial/ block1/200-LOGIC/20240501_release_v1

此时该stage version已在你的working space

接着可以把你的design data以及DQI report, 放入该stage version

TIME: @20240816_143719 END dvc_checkout_folder

twcad03:/projusers/dt1l409af01> tree

.block -> /projusers/dt1l409af01/DVC/P1-trial/block1

.container -> .version/.

DVC

 -> P1-trial

 P1-trial

 -> block1

 block1

 -> 200-LOGIC

 200-LOGIC

 -> 20240501_release_v1

 20240501_release_v1

.phase -> /projusers/dt1l409af01/DVC/P1-trial

.stage -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC

.version -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC/20240501_release_v1

- 当你使用checkout命令,在你的working space之下会建立出你的working stage version指标
- 接下来你的其他操作都是对于此working stage version来进行
- 若要将切换指标到别的stage version请再执行”dvc folder checkout” command来进行切换

成员: Copy Object

■使用dvc object copy放入你的design data

ex. > dvc object copy block1.v block1.v

此命令注记了要放入svn的文档/文件夹,你可以分批执行此命令
然后用checkin命令一次全部放入svn DB

```
twcad03:/projusers/d1tl409af01/RUN/T221_LEC_20240611> dvc object copy block1.v block1.v
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409af01/DVC
Copying object at block1.v
A      block1.v
```

```
twcad03:/projusers/d1tl409af01/RUN/spec> ls
upf.sdc
twcad03:/projusers/d1tl409af01/RUN/spec> dvc object copy upf.sdc upf.sdc
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409af01/DVC
Copying object at upf.sdc
A      upf.sdc
```

注意: 此时在你的working space虽已有这些design data, 但尚未放入svn DB

```
twcad03:/projusers/dt1l409af01> tree
.
├── :block -> /projusers/dt1l409af01/DVC/P1-trial/block1
├── :container -> :version/
├── DVC
│   ├── : -> P1-trial
│   ├── P1-trial
│   │   ├── : -> block1
│   │   ├── block1
│   │   │   ├── : -> 200-LOGIC
│   │   │   ├── 200-LOGIC
│   │   │   │   ├── : -> 20240501_release_v1
│   │   │   │   ├── 20240501_release_v1
│   │   │   │   │   ├── block1.v
│   │   │   │   │   └── upf.sdc
│   │   └── :phase -> /projusers/dt1l409af01/DVC/P1-trial
│   │       ├── :stage -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC
│   │       └── :version -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC/20240501_release_v1
```

成员: Checkin DVC_Path



- 使用dvc dvcpath checkin将你先前以dvc object copy所注记的design data, checkin svn DB

ex. > dvc dvcpath checkin P1-trial/block1/200-LOGIC/20240501_release_v1

```
twcad03:/projusers/dt1l409af01> dvc dvcpath checkin P1-trial/block1/200-LOGIC/20240501_release_v1  
No environment variable found: DVC_WORKING  
Set DVC working folder in: /projusers/dt1l409af01/DVC  
Checking-in something under P1-trial/block1/200-LOGIC/20240501_release_v1 to svn
```

此时你已完成design data的摆放

接着你需要通知你的下家checkout P1-trial/block1/200-LOGIC/20240501_release_v1



实例操作 d1tl409a

Checkout Design Data (for 下家)

成员: Checkout 工作文件夹

■ > source /lyg/projects/d1tl409a/cshrc_dop

■ 使用DVC之前, 你需要Checkout出工作文件夹 (working space)

□ 第一步请设定环境变量: DVC_WORKING, 来指定你DVC的工作文件夹路径
往后你所有的DVC Wrapper Command都是对此DVC_WORKING文件夹操作

- 若你需产生不同的DVC工作文件夹, 你可以藉由修改DVC_WORKING, 再做一次 dvc project checkout
- 若你需切换不同的DVC工作文件夹, 你也可以藉由修改DVC_WORKING, 再来做后续的操作

建议你可以把它写在.cshrc内

ex. > setenv DVC_WORKING /projusers/d1tl409af01/DVC

□ 以项目代码: d1tl409a, Checkout出工作文件夹

Ex. dvc project checkout

```
twcad03:/projusers/d1tl409ad01> dvc project checkout
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409ad01/DVC
Checking out project
=====
TIME: @20240816_161137 BEGIN dvc_checkout_project d1tl409a /projusers/d1tl409ad01/DVC
SETP: DESIGN_PROJT = d1tl409a
INFO: Checkout Project Design Respository : d1tl409a
SETP: PROJT_PATH = /projusers/d1tl409ad01/DVC
Checked out revision 72.
TIME: @20240816_161137 END dvc_checkout_project
=====
twcad03:/projusers/d1tl409ad01> tree
.
├── d1tl409a -> /projects/d1tl409a
└── DVC
```

成员: Checkout Stage Version

■Checkout上家的Stage Version:

ex. > dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1

此时你若看到下列信息,代表此stage version尚未被PL所接受
请通知PL尽速进行审批

```
twcad03:/projusers/dt1l409ad01> dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/dt1l409ad01/DVC
PL doesn't confirm this stage version yet.
Skip this checkout action.
```

成员: Checkout Stage Version

■Checkout上家的Stage Version:

ex. > dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1

此时该stage version已在你的working space

```
twcad03:/projusers/dt1l409ad01> dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/dt1l409ad01/DVC
Checking out folder: P1-trial/block1/200-LOGIC/20240501_release_v1
TIME: @20240816_143719 END dvc_checkout_folder
```

```
twcad03:/projusers/dt1l409af01> tree
```

```
.
├── :block -> /projusers/dt1l409af01/DVC/P1-trial/block1
├── :container -> :version/
├── DVC
│   ├── : -> P1-trial
│   ├── P1-trial
│   │   ├── : -> block1
│   │   ├── block1
│   │   │   ├── : -> 200-LOGIC
│   │   │   ├── 200-LOGIC
│   │   │   │   ├── : -> 20240501_release_v1
│   │   │   │   └── 20240501_release_v1
├── :phase -> /projusers/dt1l409af01/DVC/P1-trial
├── :stage -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC
└── :version -> /projusers/dt1l409af01/DVC/P1-trial/block1/200-LOGIC/20240501_release_v1
```

- 当你使用checkout命令,在你的working space之下会建立出你的working stage version指标
- 接下来你的其他操作都是对于此working stage version来进行
- 若要将切换指标到别的stage version请再执行”dvc folder checkout” command来进行切换



实例操作 d1tl409a

PL审批成员提交的 Stage Version

PL: Review List of Stage Version

■ > source /lyg/projects/d1tl409a/cshrc_dop

■ 列出需要审批的Stage Version:

ex. > dvc dvcpath confirmlist

```
twcad03:/projusers/dt1l409ac01> dvc dvcpath confirmlist
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/dt1l409ac01/DVC
Please do 'dvc folder checkout' to review the stage versions.
If ok, please do 'dvc dvcpath confirm', else notify the member to fix it.
```

```
P1-trial/block1/200-LOGIC/20240501_release_v1
P1-trial/block2/310-MBIST/20240501_release_v1
P1-trial/block3/000-DATA/20240612_cust_v1
```


PL: Checkout 工作文件夹

■ 使用DVC之前, 你需要Checkout出工作文件夹 (working space)

□ 第一步请设定环境变量: DVC_WORKING, 来指定你DVC的工作文件夹路径
往后你所有的DVC Wrapper Command都是对此DVC_WORKING文件夹操作

- 若你需产生不同的DVC工作文件夹, 你可以藉由修改DVC_WORKING, 再做一次 dvc project checkout
- 若你需切换不同的DVC工作文件夹, 你也可以藉由修改DVC_WORKING, 再来做后续的操作

建议你可以把它写在.cshrc内

ex. > setenv DVC_WORKING /projusers/d1tl409af01/DVC

□ 以项目代码: d1tl409a, Checkout出工作文件夹

Ex. dvc project checkout

```
twcad03:/projusers/d1tl409aa00> dvc project checkout
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409aa00/DVC
Checking out project
=====
TIME: @20240821_163326 BEGIN dvc_checkout_project d1tl409a /projusers/d1tl409aa00/DVC
SETP: DESIGN_PROJT = d1tl409a
INFO: Checkout Project Design Respository : d1tl409a
SETP: PROJ_PATH = /projusers/d1tl409aa00/DVC
Checked out revision 200.
TIME: @20240821_163326 END dvc_checkout_project
=====
```

PL: Checkout Stage Version



■Checkout需审批的Stage Version:

ex. > dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1

```
twcad03:/projusers/dt1l409aa00> dvc folder checkout P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/dt1l409aa00/DVC
Checking out folder: P1-trial/block1/200-LOGIC/20240501_release_v1
=====
TIME: @20240821_164149 BEGIN dvc_checkout_folder P1-trial/block1/200-LOGIC/20240501_release_v1
INFO: DVC_PATH = /P1-trial/block1/200-LOGIC/20240501_release_v1
=====
TIME: @20240821_164149 BEGIN 30_checkout_project.csh dt1l409a /projusers/dt1l409aa00/DVC
SETP: DESIGN_PROJT = dt1l409a
INFO: Checkout Project Design Respository : dt1l409a
SETP: PROJT_PATH = /projusers/dt1l409aa00/DVC
TIME: @20240821_164150 END 30_checkout_project.csh
=====
TIME: @20240821_164150 BEGIN 31_checkout_phase.csh P1-trial
SETP: DESIGN_PHASE = P1-trial
INFO: Checkout Project Design Phase : P1-trial
Checked out revision 200.
property 'svn:ignore' set on 'DVC'
TIME: @20240821_164150 END 31_checkout_phase.csh
=====
```

PL: Review Stage Version

- 若Stage Version审批通过, 请执行下列命令

ex. > dvc dvcpath confirm P1-trial/block1/200-LOGIC/20240501_release_v1

- 若Stage Version审批不通过, 请通知成员更正
执行下列命令,可知道提交的成员之帐号

ex. > dvc dvcpath confirminfo P1-trial/block1/200-LOGIC/20240501_release_v1

```
twcad03:/projusers/d1tl409aa00> dvc dvcpath confirminfo P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409aa00/DVC
-----
Member: d1tl409ad01
Wed Aug 21 15:28:30 CST 2024
```



实例操作 d1tl409a

The Others

查看所有的DVC Version

- 可使用“svn list”来知道此项目的所有DVC Version, 之后你可再用 dvc folder checkout命令下载

在科创环境:

```
> svn list -R svn://zhuunxsvn01:11216/d1tl409a
```

Repository path:

svn://\$SVN_HOST:\$SVN_PORT/\$pCode

你可以echo出这些环境变量

```
[d1tl409aa00@zhuunxetx02 ~]$ echo $SVN_HOST  
zhuunxsvn01  
[d1tl409aa00@zhuunxetx02 ~]$ echo $SVN_PORT  
11216  
[d1tl409aa00@zhuunxetx02 ~]$ echo $pCode  
d1tl409a
```

成员: Remove Stage Version

■ Remove 某个的 Stage Version:

ex. > dvc folder remove P1-trial/block1/200-LOGIC/20240501_release_v1

```
twcad03:/projusers/d1tl409ad01/DVC> dvc folder remove P1-trial/block1/200-LOGIC/20240501_release_v1
No environment variable found: DVC_WORKING
Set DVC working folder in: /projusers/d1tl409ad01/DVC
Removing folder: P1-trial/block1/200-LOGIC/20240501_release_v1
=====
TIME: @20240819_143534 BEGIN dvc_remove_folder P1-trial/block1/200-LOGIC/20240501_release_v1
INFO: Remove Project Design Version - P1-trial/block1/200-LOGIC/20240501_release_v1
```

Committed revision 136.

```
TIME: @20240819_143534 END dvc_remove_folder
=====
```

```
twcad03:/projusers/d1tl409ad01/DVC> tree
```

```
.
├── : -> P1-trial
├── P1-trial
│   ├── L-> block1
│   └── block1
│       ├── : -> 000-DATA
│       ├── 200-LOGIC
│       ├── : -> 20240501_release_v1
│       └── 20240501_release_v1
│           ├── block1.v
│           └── upf.sdc
├── 000-DATA
│   ├── : -> 20240501_datain_v1
│   └── 20240501_datain_v1
```

- 此命令会在此项目的DVC SVN repository, 删除所指定的 stage version
- 但在你的working space并不会被移除这个 stage version.
你可用"rm"命令直接移除

成员: 项目帐号Quota不够用

- 若你的项目帐号的硬碟配额不够用
 你可直接用“rm”命令把你不需要用的stage version移除
- 往后你可再用“dvc folder checkout”命令把那些Stage Version, 再重新checkout出来

```
twcad03:/projusers/d1tl409ad01/DVC> tree
```

```
.
├── : -> P1-trial
├── P1-trial
│   ├── L-> block1
│   └── block1
│       ├── : -> 000-DATA
│       ├── 200-LOGIC
│       │   ├── : -> 20240501_release_v1
│       │   └── 20240501_release_v1
│       │       ├── block1.v
│       │       └── upf.sdc
│       └── 000-DATA
│           ├── : -> 20240501_datain_v1
│           └── 20240501_datain_v1
```

DVC Native Command

Import data into DVC design repository



Assign svn server database path (default: \$HOME/svn_root)

```
setenv  SVN_ROOT      /nfs/disks/svn_root
```

Assign project name and create database root directory (default: '_')

```
dvc_checkout_project testcase [<PROJT_PATH>]
```

Create design version folder and checkin design files

```
dvc_create_design      P1-trial/chip/000-DATA/2017_0910-xxx
```

```
dvc_checkout_design
```

```
    dvc_link_object    /nfs/disks/rundir                RUNDIR
```

```
    dvc_copy_object    /sfs/disks/rundir/design.v        design.v
```

```
    dvc_copy_object    /sfs/disks/rundir/design.sdc      design.sdc
```

```
    dvc_set_dqi         CELL_COUNT                      11566
```

```
dvc_checkin_design
```

Handle design folder with multiple steps

Create design version folder and checkin design files

dvc_create_design P1-trial/chip/400-APR/2017_0910-xxx

dvc_checkout_design

 dvc_link_object /nfs/disks/apr/rundir RUNDIR

 dvc_create_container place (在working space, svn add a folder)

 dvc_copy_object src/design.v design.v

 dvc_copy_object src/design.sdc design.sdc

 dvc_set_dqi CELL_COUNT 11566

 dvc_checkin_container (在working space, svn commit a folder)

 dvc_create_container cts

 dvc_copy_object cts/design.v design.v

 dvc_copy_object cts/design.sdc design.sdc

 dvc_set_dqi CELL_COUNT 12345

 dvc_checkin_container

dvc_checkin_design

Handle design folder with multiple modes

Create design version folder and checkin design files

dvc_create_design P1-trial/chip/520-sta/2017_0910-xxx

dvc_checkout_design

 dvc_link_object /nfs/disks/sta/rundir RUNDIR

 dvc_create_container func/0p80V/ttt_85C_rctyp

 dvc_copy_object src/design_func.sdc design.sdc

 dvc_copy_object sta/000/design.rpt sta.rpt

 dvc_set_dqi WNS 50

dvc_checkin_container

dvc_create_container scan/0.72V/sss_125c_rcmax

 dvc_copy_object src/design_scan.sdc design.sdc

 dvc_copy_object sta/005/design.rpt sta.rpt

 dvc_set_dqi WNS -100

dvc_checkin_container

dvc_checkin_design

Checkout data for design review

Checkout all designs(phase/block/stage/versions) in project_name

```
dvc_checkout_project --recursive project_name [<proj_root>]
```

Checkout all subfolders(blocks,stages,versions) under phase_name

```
dvc_checkout_phase --recursive phase_name
```

Checkout all subfolders(stages,versions) under block_name

```
dvc_checkout_block --recursive block_name
```

Checkout all subfolders(versions) under stage_name

```
dvc_checkout_stage --recursive stage_name
```

Checkout all subfolders(containers) under version_name

```
dvc_checkout_version --recursive version_name
```



Adobe Acrobat
文件

Thank you

谢谢您

謝謝您

ありがとう
ございました