Week5

我是谁，我在哪，我要干什么？？？

复现

任务

基于starry-old，在qemu运行dora，控制机械臂

环境配置

基本dora分析看https://github.com/Starry-OS/Dora-analysis

需要用以下指令启动starry

```
make A=apps/monolithic_userboot FEATURES=img,sched_rr,lwext4_rust LOG=off ACCEL=n
NET=y run
```

fat32 的偶发会出现并发问题，先用ext4（很慢）

```
sudo apt install cmake
sudo apt install musl-tools
export CC=/usr/bin/x86_64-linux-musl-gcc
rustup target add x86_64-unknown-linux-musl
sudo ln -s /usr/bin/x86_64-linux-musl-gcc /usr/bin/x86_64-linux-musl-cc
```

机械臂配置看https://help.lebai.ltd/dev/docker.html

```
docker pull registry.cn-shanghai.aliyuncs.com/lebai/l-master:latest
```

```
docker run -it -d -p 80:80 -p 5170:5170 -p 5171:5171 -p 5180:5180 -p 3010:3010 -p
3020:3020 -p 3030:3030 -p 3050:3050 registry.cn-shanghai.aliyuncs.com/lebai/l-
master:latest
```

http://localhost/dashboard，验证码找老师要

linux+机械臂

```
import requests

url = "http://localhost:3020"
payload = {
    "jsonrpc": "2.0",
    "method": "start_task",
    "params": [
        {
            "name": "main",
            "is_parallel": False,
            "loop_to": 1,
            "dir": "",
```

```
            "kind": "LUA",
            "params": ["hello"]
        }
    ],
    "id": 1
}
response = requests.post(url, json=payload)
print(response.json())
```

响应

```
{'jsonrpc': '2.0', 'id': 1, 'result': {'id': 3}}
```

Dora+linux

```
cargo run --example rust-dataflow
```

机械臂目前跑在docker里，到时候会有dora node在机械臂设备上，node怎么和机械臂通信？？？

Dora+starry+机械臂

```
./dora start benchmark.yml
```

PageFault

```
/ # ./dora start benchmark.yml
00000014-321a-71da-af3d-c380d5075317
attaching to dataflow (use `--detach` to run in background)
[1351.825843 0:27 axruntime::lang_items:5] panicked at modules/axtrap/src/arch/x86_64/mod.rs:61:17:
Kernel #PF @ 0xffffff80002c25d5, fault_vaddr=0x70, error_code=0x0:
TrapFrame {
    rax: 0xffffff8007cdd0f8,
    rcx: 0x0,
    rdx: 0x0,
    rbx: 0x1,
    rbp: 0xffffff801f5558c0,
    rsi: 0xffffff8007cdd0f8,
    rdi: 0xffffff8007b5bc68,
    r8: 0x0,
    r9: 0xffffff801eeeddc0,
    r10: 0x1,
    r11: 0x1,
    r12: 0xffffff8007b5bc38,
    r13: 0x1,
    r14: 0xffffff8007b5b360,
    r15: 0x40,
    vector: 0xe,
    error_code: 0x0,
    rip: 0xffffff80002c25d5,
    cs: 0x10,
    rflags: 0x246,
    rsp: 0xffffff801f555748,
    ss: 0x18,
}
[1351.830177 0:27 axbacktrace:43] Call trace:
[1351.830540 0:27 axbacktrace::x86:91] 0xFFFFFF800026AABB
[1351.830819 0:27 axbacktrace::x86:91] 0xFFFFFF80002C049C
```