# 测试总结

- 从开始创建pod到启动wasm instance（不含拉取镜像）的总时长（包含创建、启动pod，创建、启动wasm instance）

  - 原containerd+runwasi：320.06ms

  - 改造后containerd+runwasi：286.98ms

# 改造后containerd+runwasi

## 性能测试结果

- 平均286.98ms

    

    ```
    root@VM-0-11-ubuntu:~# awk '{ sum += $1 } END { printf("%.2f\n", sum/NR) }'  /root/data/raw/boot-serial-wasm-time.dat
    286.98
    ```

    ```
    root@VM-0-11-ubuntu:~# cat /root/data/raw/boot-serial-wasm-time.dat
    614
    252
    251
    238
    230
    243
    233
    237
    252
    244
    255
    ```

# 改造后containerd+runwasi

**性能测试脚本内容**

- wasmtests/benchmark/boot-serial-wasm-time.sh

```
cat > $workdir/json/container/container_$i.json << EOF
{
    "metadata": {
        "name": "testwasm",
        "namespace": "k8s.io"
    },
    "image": {
      "image": "wasi-demo-app",
      "annotations": {
          "wasm.module.url": "https://raw.githubusercontent.com/Youtirsin/wasi-demo-apps/main/wasi-demo-app.wasm",
          "wasm.module.filename": "wasi-demo-app.wasm"
          }
    },
    "command": [
        "wasi-demo-app.wasm", "daemon"
    ],
    "log_path":"wasm.log",
    "linux": {
        }
    }
}
EOF
```

```
cat > $workdir/json/pod/pod_$i.json <<EOF
{
    "metadata": {
        "name": "test-sandbox$i",
        "namespace": "k8s.io",
        "attempt": 1,
        "uid": "hdishd83djaidwnduwk28bcsb"
    },
    "log_directory": "/tmp",
    "linux": {
    }
}
```

# 改造后containerd+runwasi

## 性能测试脚本内容

- wasmtests/benchmark/boot-serial-wasm-time.sh

```
#Start timing
start_time=$(date +%s.%N)

    # crictl run -r kuasar --no-pull $workdir/json/container/container_$i.json $workdir/json/pod/pod_$i.json
    crictl -r unix:///run/containerd/containerd.sock run --runtime="wasm" --no-pull $workdir/json/container/container_$i.json $workdir/json/pod/pod_$i.json

#Wait for all the containers to finish starting
a=`crictl -r unix:///run/containerd/containerd.sock ps | grep testwasm | wc -l`
while [ $a -ne $(($i+1)) ];
do
a=`crictl -r unix:///run/containerd/containerd.sock ps | grep testwasm | wc -l`
done

#End timing
end_time=$(date +%s.%N)
boot_time=$(getTiming $start_time $end_time)

echo "BootTime: ${boot_time}ms"
```

# 原containerd+runwasi

## 性能测试结果

- 320.06ms

```
root@VM-0-11-ubuntu:~# awk '{ sum += $1 } END { printf("%.2f\n", sum/NR) }' /root/data/raw/boot-serial-runwasi-wasm-time.dat
320.06
```

```
root@VM-0-11-ubuntu:~# cat /root/data/raw/boot-serial-runwasi-wasm-time.dat
827
294
304
317
260
313
268
307
314
296
309
```

# 问题

- runwasi编译的wasmedge shim可能会出现问题，目前只有之前编译好的一个 shim能正常使用，后续编译的都不能正常使用；

  - /proc/exec/fdxx closed，不能正常输出结果