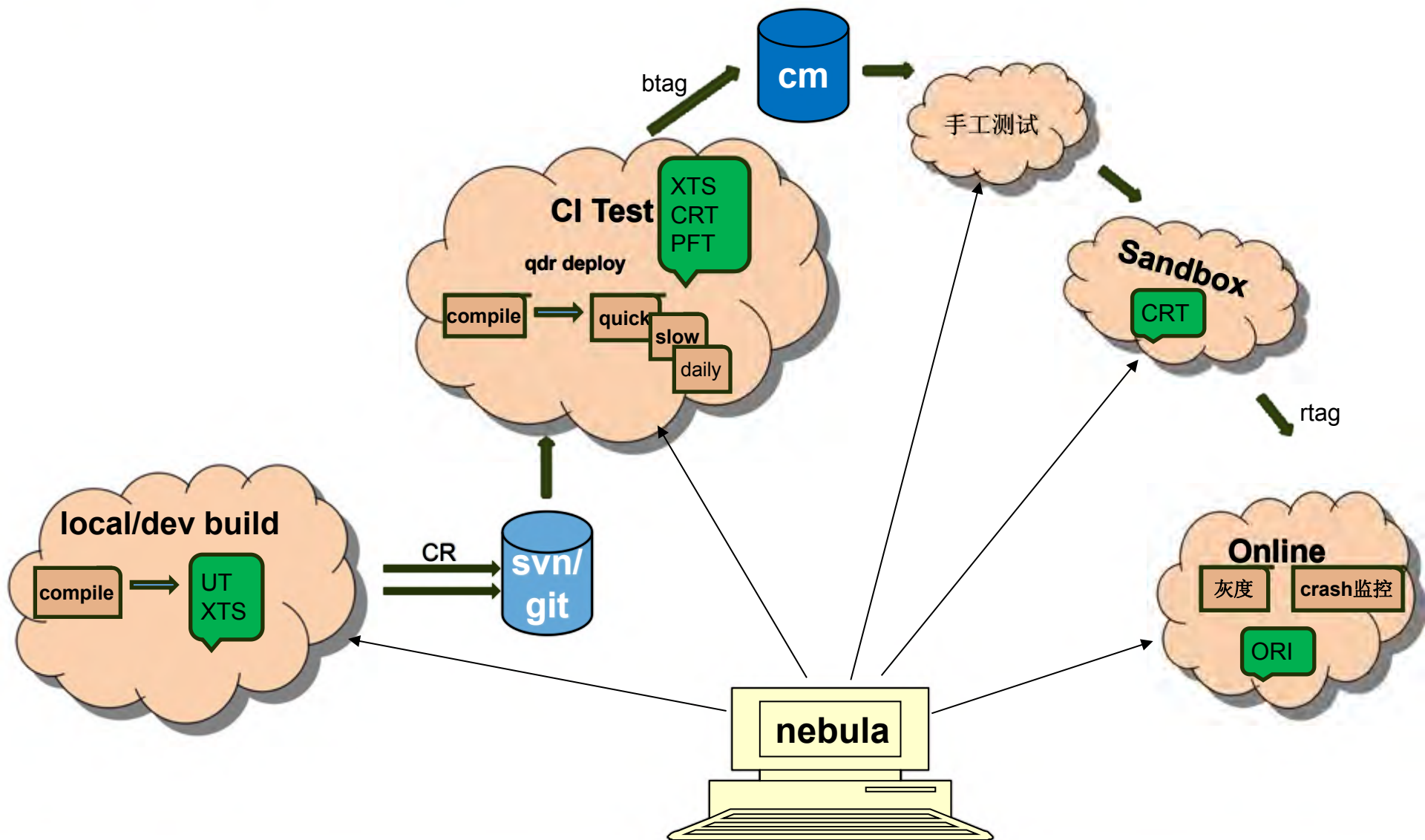


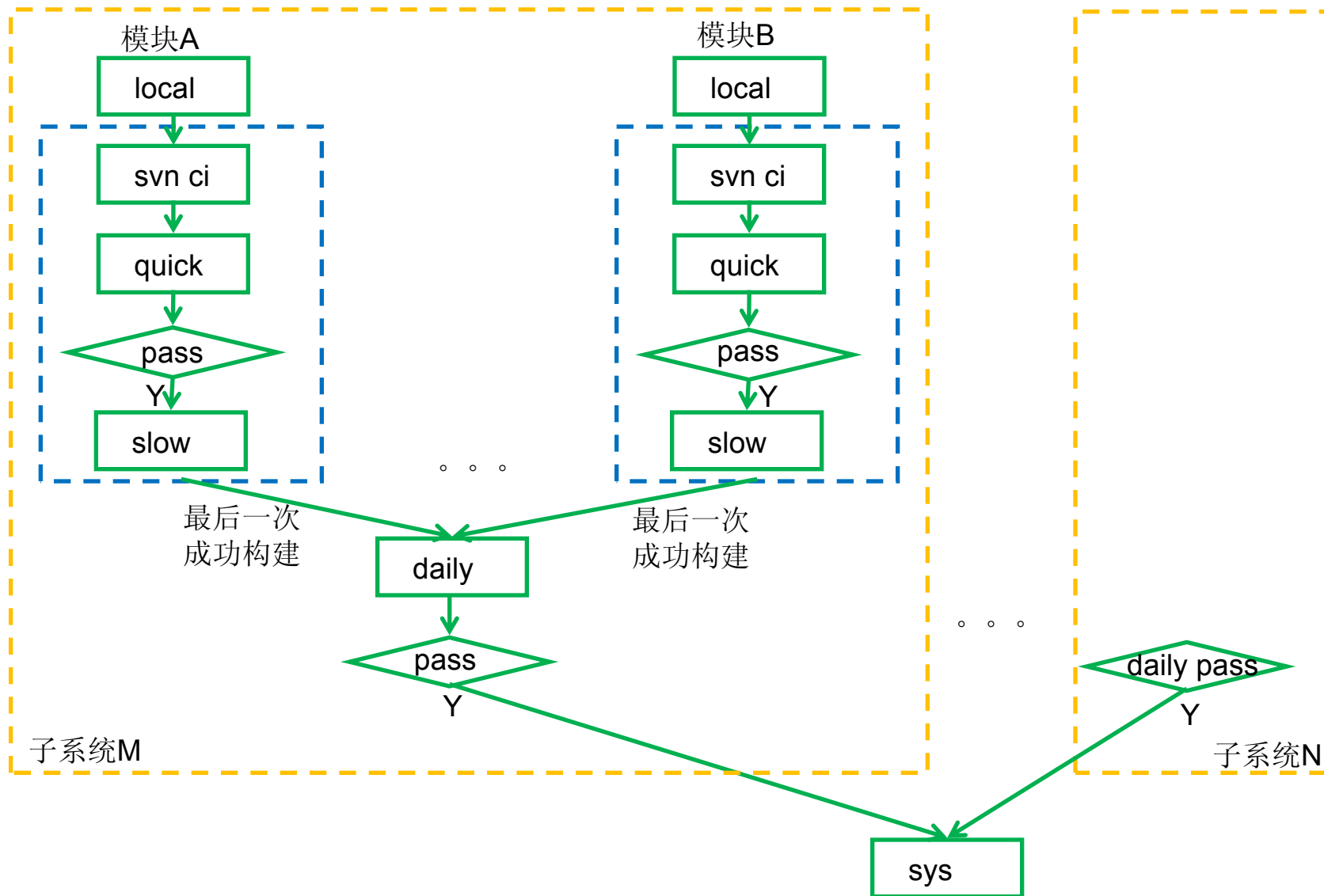
APP客户端测试自动化安全网

去哪儿网 范留杰



- 自动化安全网
- 持续集成
- UI功能自动化框架——XTS
- 手机资源管理平台——nebula







➤ quick job

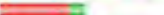
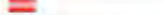
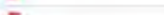
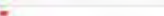
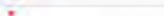
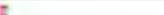
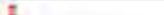
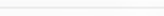
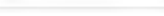
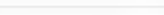
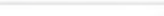
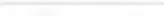
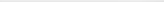
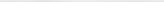
- ✓ UI自动化功能测试
- ✓ 智能选择出来的、和这次代码修改相关的case

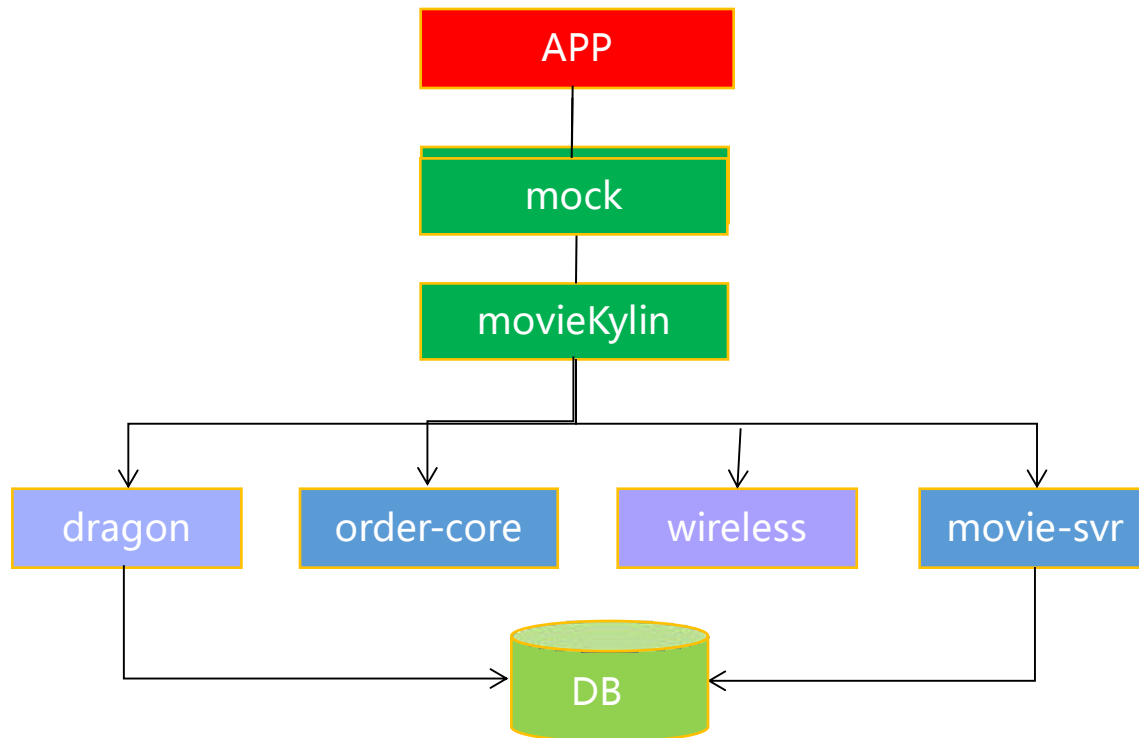
➤ slow job

- ✓ 全量UI自动化功能case，分布式运行
- ✓ monkey测试crash

➤ daily job

- ✓ 运行全量UI自动化功能case，并且收集每个case的覆盖率

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
com.soumar.atom.gb.order		0%		0%	1,709	1,709	4,671	4,671	530	530	135	135
com.soumar.atom.gb.fragment.detail.hotel		14%		8%	1,451	1,558	3,644	4,224	549	639	128	159
com.soumar.atom.gb.view		23%		17%	1,378	1,602	3,285	4,366	659	832	88	125
com.soumar.atom.gb.fragment.homepage		19%		13%	868	981	1,994	2,511	259	353	50	72
com.soumar.atom.gb.des.utils		19%		14%	529	604	1,378	1,709	163	223	11	25
com.soumar.atom.gb.activities		7%		10%	283	300	945	1,026	111	124	22	25
com.soumar.atom.gb.adapters		4%		5%	332	349	882	941	140	153	24	29
com.soumar.atom.gb.filter		49%		29%	355	482	578	1,133	67	145	9	25
com.soumar.atom.gb.des.blur		0%		0%	176	176	524	524	74	74	9	9
com.soumar.atom.gb.utils		0%		0%	135	138	355	358	71	74	17	18
com.soumar.atom.gb.pay		0%		0%	117	117	285	285	40	40	10	10
com.soumar.atom.gb.des.base		48%		32%	234	318	406	734	63	134	4	13
com.soumar.atom.gb.calendar		0%		0%	90	90	260	260	40	40	6	6
com.soumar.atom.gb.view.pullrefresh		39%		34%	143	197	289	472	49	84	5	11
com.soumar.atom.gb.model.param.gb		6%		0%	149	155	344	369	72	78	49	55
com.soumar.atom.gb.model.response.gb		11%		0%	231	243	331	378	189	201	176	188
com.soumar.atom.gb.fragment.detail.hotel.controller		0%		0%	100	100	195	195	34	34	10	10
com.soumar.atom.gb.order.reserve		0%		0%	78	78	209	209	21	21	5	5
com.soumar.atom.gb.des.views		38%		33%	94	120	184	306	35	53	3	6
com.soumar.atom.gb.fragment.detail.hotel.views		7%		2%	62	68	174	192	35	41	6	8
com.soumar.atom.gb.fragment.homepage.history		1%		1%	51	53	120	123	13	15	1	2
com.soumar.atom.gb.des.animations		0%		0%	34	34	121	121	27	27	8	8
com.soumar.atom.gb.debug.utils		65%		27%	60	87	126	323	23	48	2	15
com.soumar.atom.gb.model.response.hotel		33%		31%	47	57	69	96	39	49	25	34
com.soumar.atom.gb.lvPlugins		0%		0%	11	11	43	43	5	5	1	1
com.soumar.atom.gb.fragment.homepage.banner		86%		53%	22	49	18	115	5	26	0	7
com.soumar.atom.gb.model.bean		64%		46%	18	31	21	56	8	19	5	13
com.soumar.atom.gb.application		0%		0%	6	6	23	23	4	4	1	1
com.soumar.atom.gb.des.base.network		59%		50%	7	12	16	36	5	10	2	5
com.soumar.atom.gb		0%		n/a	2	2	2	2	2	2	1	1
com.soumar.atom.gb.activities.container		84%		n/a	1	3	3	13	1	3	1	2
com.soumar.atom.gb.activities.backup		0%		n/a	1	1	1	1	1	1	1	1
com.soumar.atom.gb.des.base.pay		0%		n/a	1	1	1	1	1	1	1	1



筛选



经济型
30米
¥228.5起 立减¥
¥52.36

切换


```
/mobile/h5/couponQ
{"couponBusiType":
00,"startTime":nul
rl":"https://paybe
nRestriction":null
11,"activeShowFlag
tps://paybetak.gun
gUrl":"https://mpk
1444551518%22%2C%2
%22userName%22%3A%
%22pid%22%3A%22100
%22%2C%22vid%22%3A%
,"status":"0","sta
beta.cn0.gunar.com
```

SE

酒店类型 - 商圈地铁 - 综合排序 - 筛选 -



超长应该变成省略号测试注意事... 团

高档豪华 ① 📶

车道沟旁边，估计也找不到，为什么呢，因为车道...

¥0起 立减¥10

¥99999999999 <fontcolor='#ff3300'size='11'>省¥90已售0



sdafd发 订

主题酒店 📶

近

¥88888888888起

¥1000

5分/已售1354545315



可看房态

都推荐试试

三 团

舒适型 ① 📶

¥92起 立减¥7

¥1 <fontcolor='#ff3300'size='11'>省¥583分/已售12



可看房态

dfjklDSAQ 团

经济型

30米

¥228.5起 立减¥11

¥52.36 <fontcolor='#ff3300'size='11'>省¥40已售-6

```
ouponList":[
Amount":300.
ouponDetailU
html","coupo
markDesc":nu
ableUrl":"ht
},"couponEx
Id%22%3A%22
0483AB%22%2C
597333%22%2C
CB7AC2593BB%
9804%22%7D"}
rver136.pay-
onList.htm
```

图片获取

- ✓ 整个页面
`capture_pic_screen()`
- ✓ 某个id的控件
`capture_pic_by_id('iv_movie')`
- ✓ 某个区域
`capture_pic_by_xy(0, 873, 720, 989)`



图片对比

- ✓ 根据像素对比
`check_pic_search()`
- ✓ 去掉 排除区域
`check_pic_search(10,20,30,40)`
- ✓ 生成diff图片

请求获取

- ✓ 截获json时获取基线request
- ✓ 请求mocksvr时获取新请求
- ✓ http header中信息截获
`b={"cityCode":"beijing_city"...}&
c={"adid":"568bb10ba049fb45"...}
{"x-real-scheme":"http","user-agent":"QSpiderAndroid"}`



请求对比

- ✓ json对比
`json_compare`
- ✓ 排除字段
`request_expect_str =
latitude,lat,currLongitude,currLatitude,longitude`
- ✓ 新加字段不对比

```
@case(owner='liujie.fan', desc='酒店首页 点击 开始搜索')
```

```
def testHotelHomeClickSearch(self):
```

```
    self.open_schema_android('501')
```

```
    self.click_by_id('com.mqunar.atom.hotel:id/atom_hotel_btn_search_hotel')
```

```
    self.capture_pic_screen()
```

```
    self.check_pic_search(10)
```

```
    self.check_request()
```

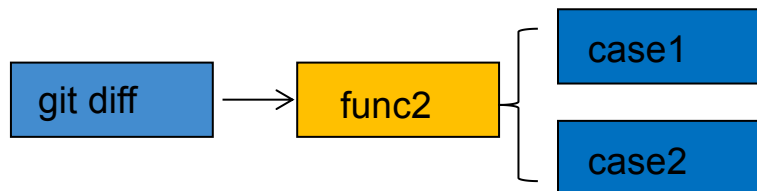
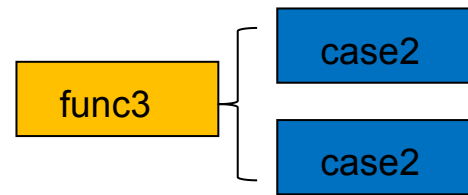
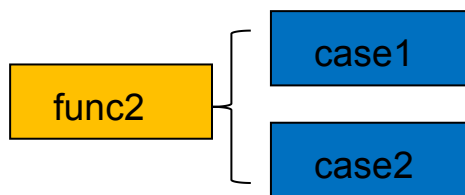
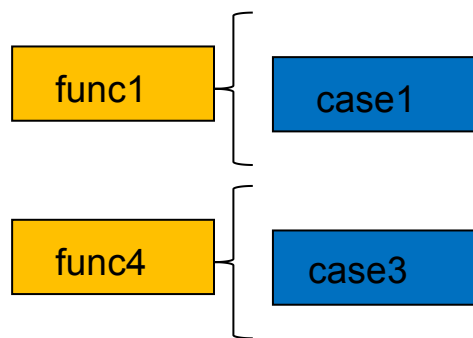
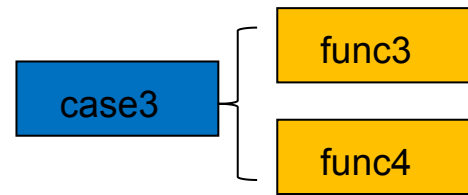
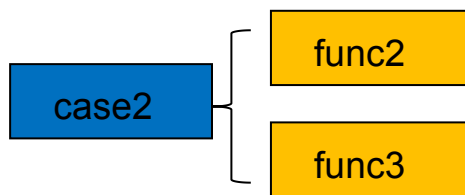
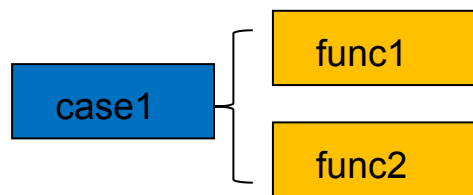
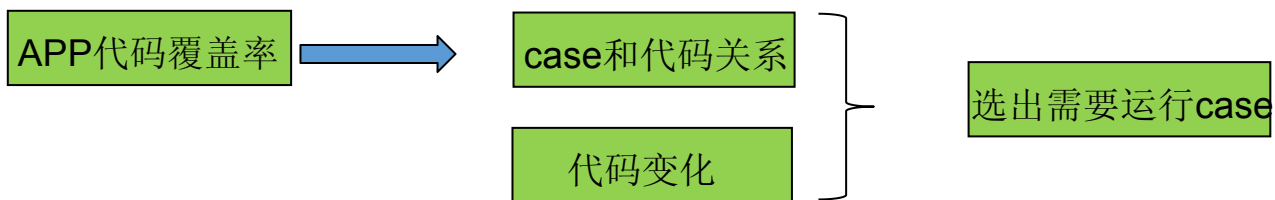
```
    return 0
```

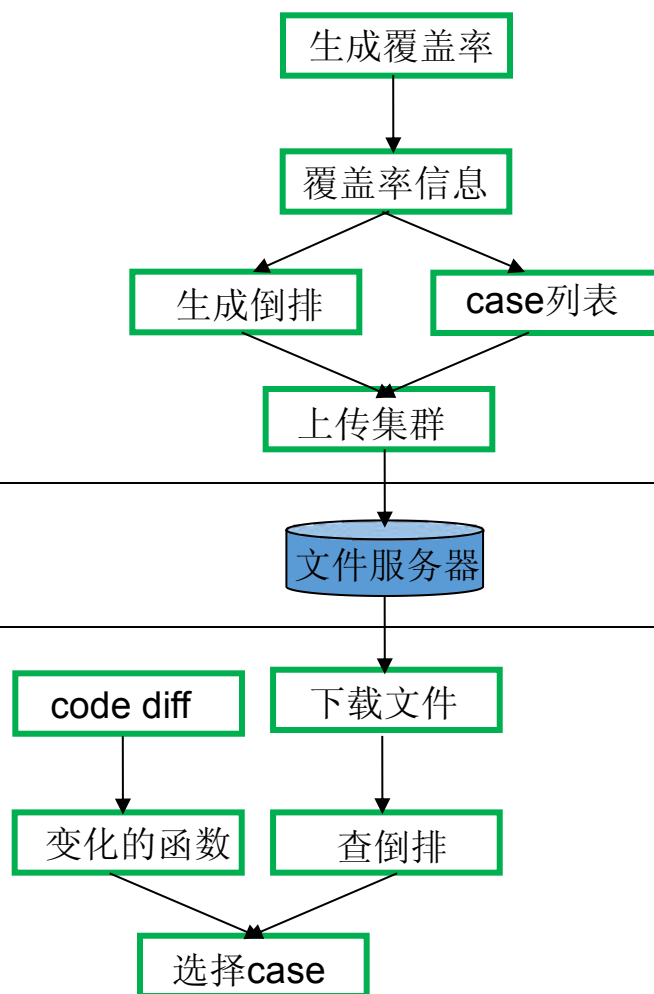


```
@case(owner='sheng.guo', desc='酒店列表页，构造异常 酒店标题超长、正常、空')
def testHotelListCheckTitlePic(self):
    mylist = []
    mylist.extend([{"data.hotel[0].title":"常娟11长常11长常11长常11长常11长常11长常11长常11
长常11"}, {"data.hotel[1].title":"留杰22"}, {"data.hotel[2].title":""}])
    self.update(mylist, 'h_title')

    self.open_schema_android('503')
    self.capture_pic_screen()
    self.check_pic_search(15)
    return 0
```

XTS—智能选case (1)





daily

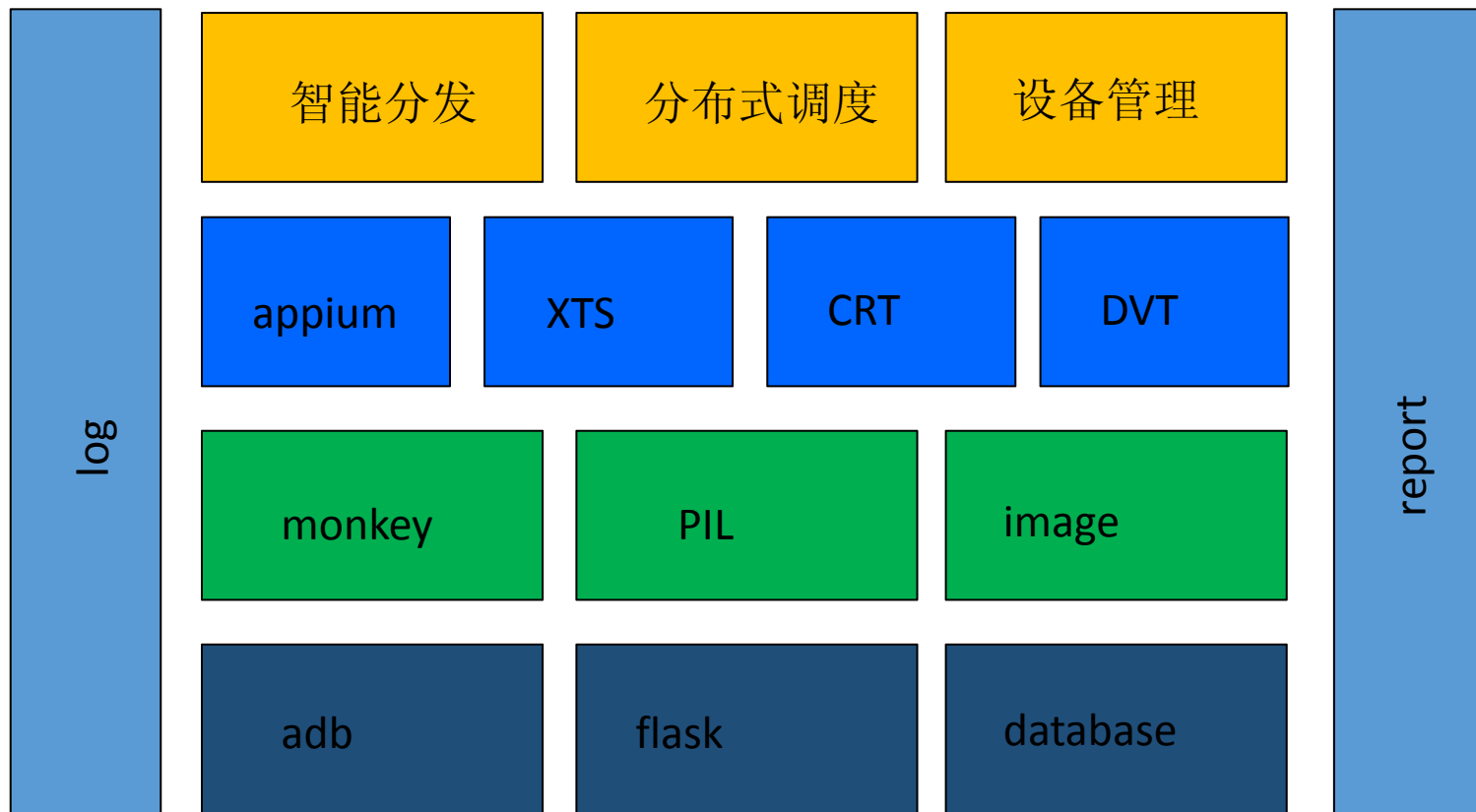
local/dev/beta

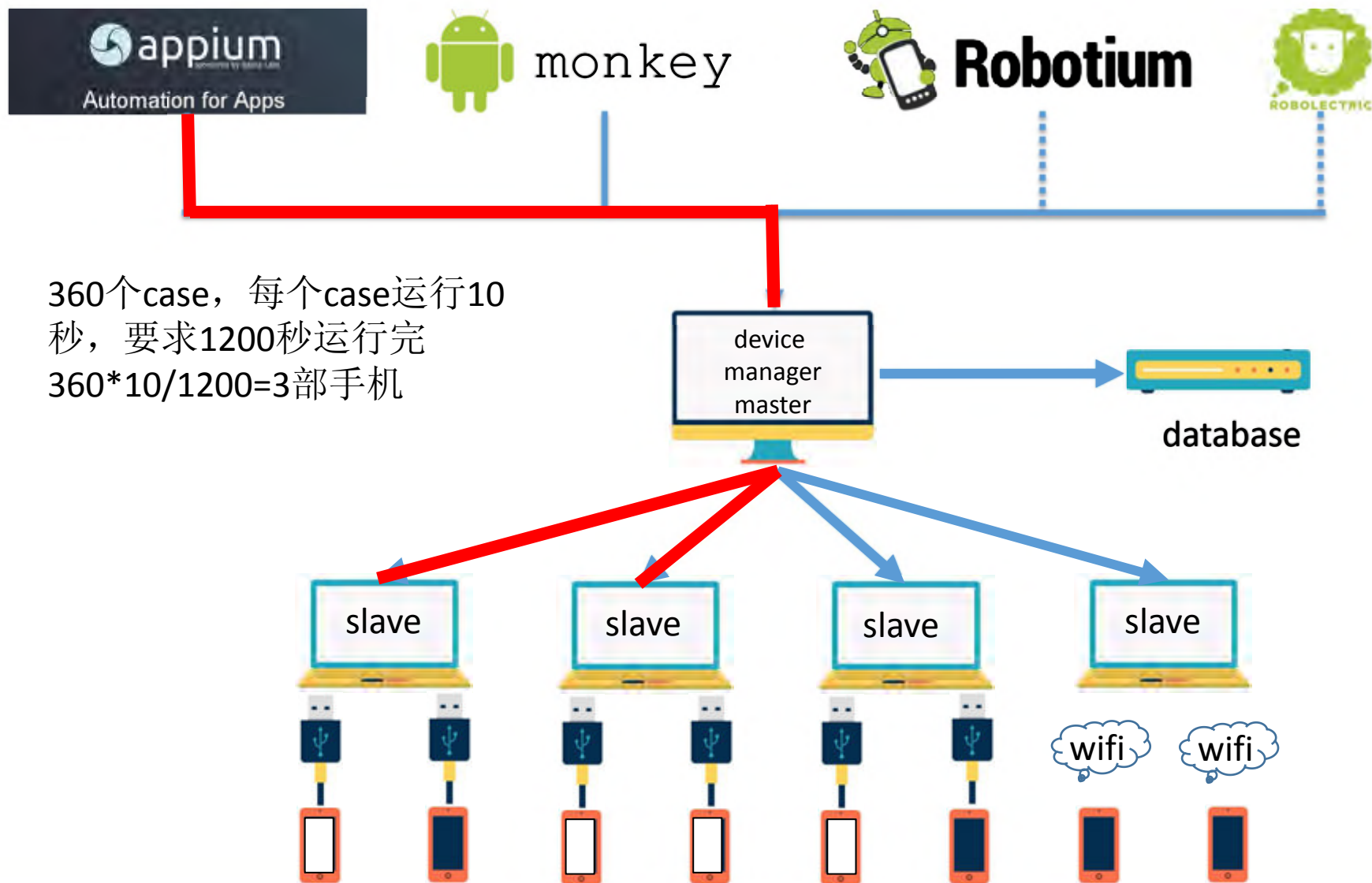
➤ 使用jacoco分析代码覆盖

```
public void setFilterTitleContent (FilterTitleItemView itemView,  
                                   Stack<MainFilterBean> selectedStack) {  
    if (itemView == null  
        || selectedStack == null  
        || selectedStack.peek() == null) {  
        return;  
    }  
  
    if (!TextUtils.isEmpty(selectedStack.peek().key)) {  
        itemView.setContent (selectedStack.peek().value);  
        return;  
    }  
}
```

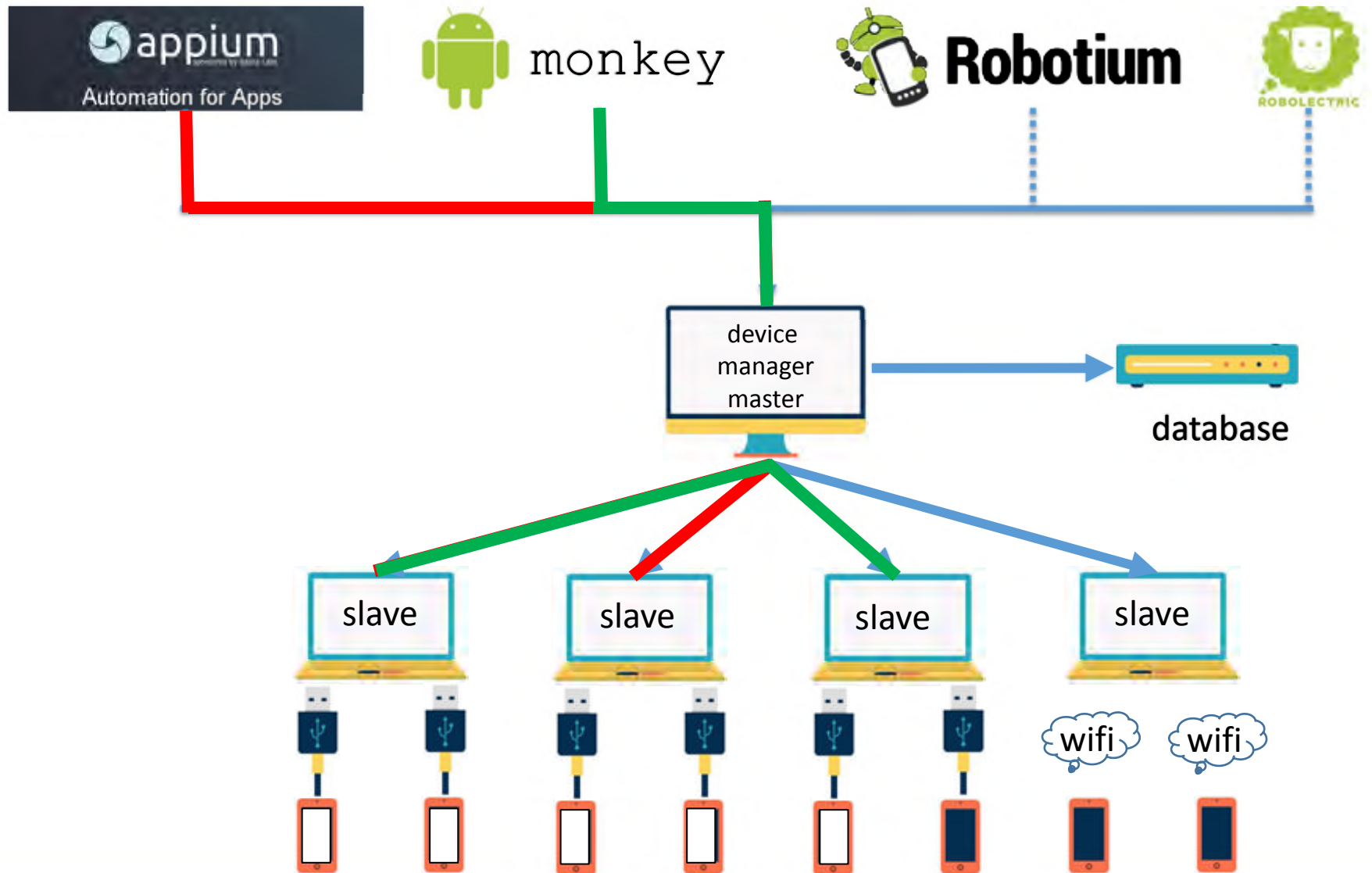
```
public void setMoreFilterSelectNum(int num) {  
    if (mMoreFilterButtonView != null) {  
        mMoreFilterButtonView.setSelectNum(num);  
        filterMoreTreeChangeItemNum = num;  
    }  
}
```

演示运行case





360个case，每个case运行10秒，要求1200秒运行完
 $360 \times 10 / 1200 = 3$ 部手机





Devices		Details		Customize		
Status	Model	Product	Carrier	Released	OS	Location
Use	MT7-TL10	MT7-TL10	null,null		4.4.2	dst62363/hub1
Use	P6-T00	P6-T00	中国联通		4.2.2	dst62363/hub1
Use	P6-U06	P6-U06			4.2.2	dst62363/hub1
Use	SM-G9280	SM-G9280			5.1.1	dst62363/hub1
Use	SM-N9009	SM-N9009			5.0	dst62358/hub2
Use	MI 3W	Xiaomi Mi 3		2013-11-01	4.4.4	dst62363/hub1
Use	MI 3W	Xiaomi Mi 3		2013-11-01	4.4.4	dst62363/hub1
Preparing	NX403A	NX403A			4.2.2	dst62363/hub1
Disconnected	GRA-UL00	GRA-UL00			5.0	dst62358/hub2
Disconnected	HM NOTE 1S	HM NOTE 1S			4.4.4	dst52613.cn1.global

Devices

Details

MT7-TL10

P6-T00

P6-U06

SM-G9280

SM-N9009

Xiaomi Mi 3

Xiaomi Mi 3

NX403A
Preparing

GRA-UL00
Disconnected

HM NOTE 1S
Disconnected

HM NOTE 1S
Disconnected

HM NOTE 1S
Disconnected

MI NOTE LTE
Disconnected

MI NOTE LTE
Disconnected

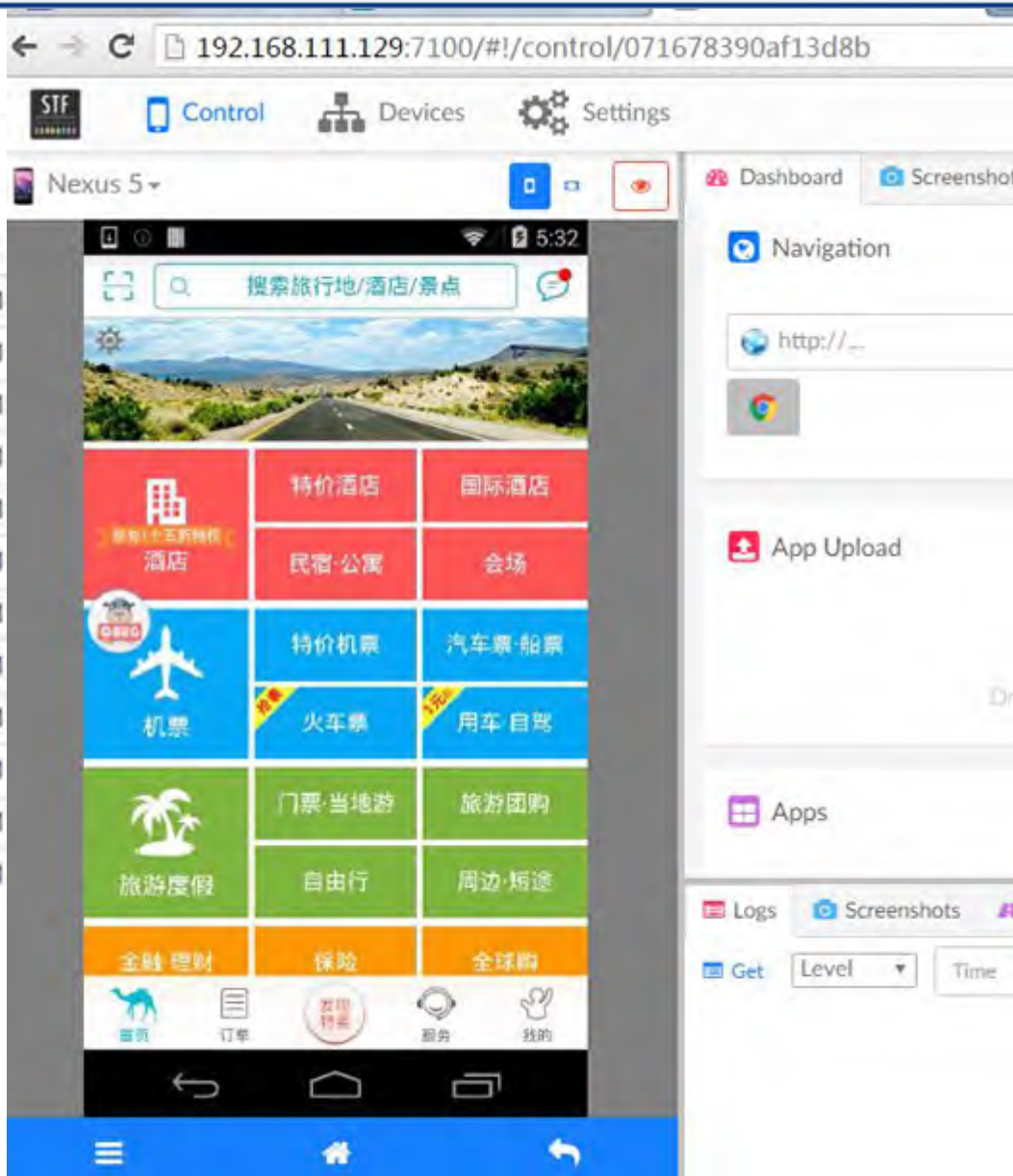
MX5
Disconnected

MX5
Disconnected

SM-N9009
Disconnected

设备列表

序号	设备号	ip地址
1	offline	192.168.111
2	1b829635	192.168.111
3	578db156	192.168.111
4	P4M7N15507000900	192.168.111
5	04c63fac13b6f5ae	192.168.111
6	071678390af13d8b	192.168.111
7	06a1614e344b8744	192.168.111
8	060b4ae1059211b8	192.168.111
9	03b5ee5ef0b59a18	192.168.111
10	51ec342d	192.168.111
11	G2W0214B07002062	192.168.111
12	030efe2f08ea6711	192.168.111



The screenshot shows the Nebula web interface for device management. The browser address bar displays the URL: 192.168.111.129:7100/#!/control/071678390af13d8b. The interface includes a navigation bar with tabs for STF, Control, Devices, and Settings. Below the navigation bar, there's a section for the selected device, Nexus 5, showing its status and a preview of the installed application. The application preview shows a travel-related app with a search bar and various service buttons like Hotels, Flights, and Travel Packages. The right sidebar contains a 'Navigation' section with a URL input field, an 'App Upload' section, and an 'Apps' section. At the bottom, there are sections for 'Logs' and 'Screenshots'.

操作

更改组

详情 下线 重启

详情 下线 重启

详情 下线 重启

详情 下线 重启

详情 下线 重启

详情 上线 重启

详情 下线 重启

详情 下线 重启

详情 下线 重启

更改组

Logs Screenshots

Get Level Time

[创建任务](#)

任务列表

序号	任务名	任务类型	Case类型	添加人员	执行时长	当前状态	创建时间	开始时间	操作	运行日志	详情URL	运行报告	备注
221	首页case	xts	hotelcase	liujie.fan		运行中	2016-07-12 15:15:11	2016-07-12 15:15:15	停止	-	详情	报告	无
220	失败	xts	hotelcase	liujie.fan		运行成功	2016-07-12 14:37:21	2016-07-12 14:37:26	-	-	详情	报告	无
219	test2	xts	hotelcase	liujie.fan		运行成功	2016-07-12 13:48:41	2016-07-12 13:48:47	-	-	详情	报告	无
218	test	xts	hotelcase	liujie.fan		运行成功	2016-07-12 13:44:09	2016-07-12 13:44:12	-	-	详情	报告	无
217	失败	xts	hotelcase	liujie.fan		运行成功	2016-07-12 13:39:35	2016-07-12 13:39:38	-	-	详情	报告	无

创建任务

任务名

列表页

任务类型

xts

执行Case

hotelcase

运行时间

非必填

case名称

非必填

是否录制

☒ 非录制

☐ 录制

apk url

非必填

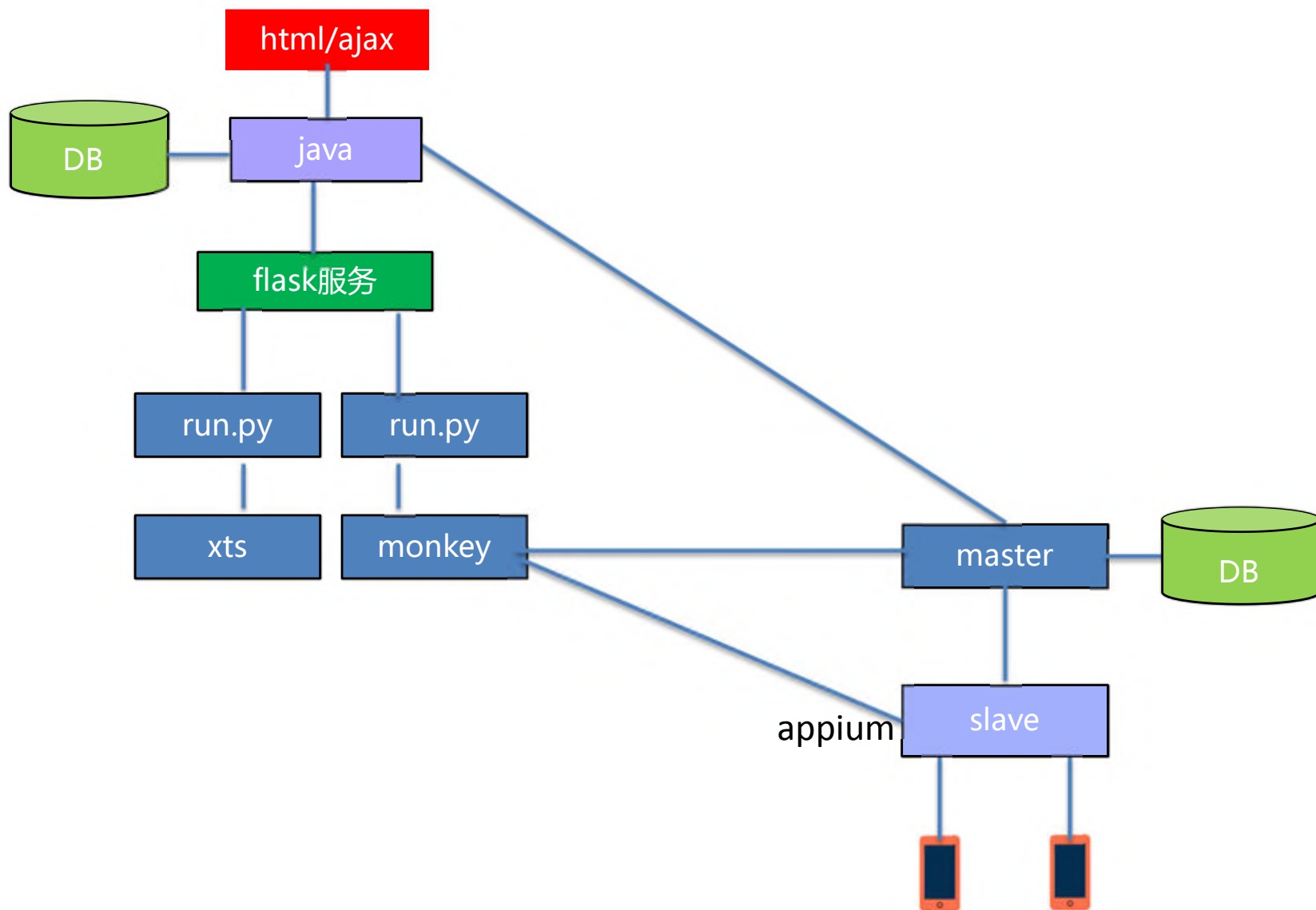
已选手机列表

TEST_samsung_SM-G900F_19_1b829635,

确认创建

<<

- ☒ TEST
 - ☒ samsung
 - ☒ SM-G900F
 - ☒ 19_1b829635
 - ☐ Xiaomi
 - ☐ MI 4W
 - ☐ 19_578db156
 - ☐ Flight_monkey
 - ☐ htc
 - ☐ HTC D816t
 - ☐ 21_HC49PWWE0030
 - ☐ Huawei
 - ☐ HUAWEI G750-T20
 - ☐ 17_GQ4SUOIRFETG9DAM
 - ☐ OPPO
 - ☐ OPPO R7
 - ☐ 19_5LZL8LVWCQFIK7BU
 - ☐ NOMAL
 - ☐ google
 - ☐ Nexus 5
 - ☐ 19_071678390af13d8b
 - ☐ Xiaomi
 - ☐ HM NOTE 1LTE
 - ☐ 19_67d4908d
 - ☐ XTS_HM
 - ☐ Huawei



演示分布式调度

