

H1 【漫图】 微服务框架技术总结

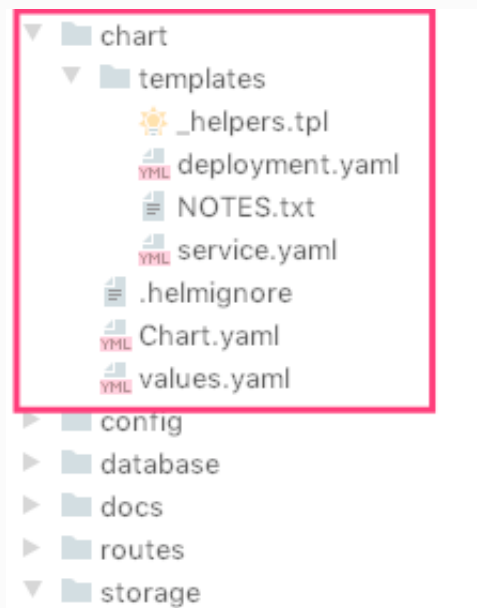
H2 微服务架构

H3 K8s 容器编排

H4 Helm: Kubernetes的包管理工具

- [【文档】Helm 用户指南](#)
- [【阿里】使用Helm部署微服务应用](#)

公司项目 chart 目录 (K8S 集群的配置)



H3 持续集成 & 自动部署



- [【英文】gitlab + k8s 集成 系列文章](#)
- [【中文】gitlab + k8s](#)

H4 后端 空间发布部署

```
# 设置是否需要读取配置中心的配置
FORCE_SETTING_DEFAULT = true
```

• 创建空间

任务执行 - 创建命名空间 - sssssssss

✓ 基础检查	[16:45:03] 检查命名空间是否存在
✓ 检查命名空间是否存在	[16:45:03] 检查配额足够
✓ 检查配额足够	
✓ 创建空间	[16:45:03] 创建命名空间
✓ 创建命名空间	[16:45:04] 创建命名空间成功
✓ 创建空间私钥	
✓ 基础服务	[16:45:04] 创建空间私钥
✓ 创建服务发现	[16:45:04] 创建空间私钥成功
✓ 等待服务发现启动	[16:45:04] 创建服务发现
✓ 创建服务网关	[16:45:05] 已创建 Service: etcd-service-dev-etcd-service
✓ 创建分支代理服务	[16:45:05] 已创建 Deployment: etcd-service-dev
✓ 等待服务网关启动	
✓ 等待分支代理启动	[16:45:05] 等待服务发现启动
✓ 访问授权	[16:45:07] Service: etcd-service-dev-etcd-service 已成功启动
✓ 创建访问地址	[16:45:09] Deployment: etcd-service-dev 已成功启动
✓ 创建HTTPS证书	

• 创建服务

任务执行 - 为 hrms-2-6-5 添加 oa-project 服务

✓ 检查镜像	[19:02:48] 基础完整性检查
✓ 基础完整性检查	[19:02:48] 部署项目: oa-project
✓ 检查 Docker 镜像完整性	[19:02:48] 部署分支: release-2.6.5
性	[19:02:48] 部署版本:
	526c30876cd79d901e121fe79alc3e1b743162ae
✓ 环境检查	[19:02:48] 提交账号: 狐狸
✓ 检查命名空间是否存在	[19:02:48] 提交时间: 2020-03-27T10:49:28Z
✓ 检查是否存在老的版本	
✓ 清理老的版本	[19:02:48] 检查 Docker 镜像完整性
✓ 等待老的版本被清理	[19:02:48] 镜像正常:
	sha256:209c6ca6e4b6c380e5d0d8bcc346f0fe
✓ 进行部署	
✓ 创建服务	[19:02:48] 检查命名空间是否存在
	[19:02:48] 命名空间正常
✓ 等待启动	
✓ 等待服务启动成功	[19:02:48] 检查是否存在老的版本

• 基于gitlab 的web终端

[k8s web terminal的实现](#)

[【gitlab 官方文档】 Web terminals](#)

[基于 Gitlab CI 和 Kubernetes 的 CI/CD](#)

命令行操作 k8s web terminal



H2 系统分解

H3 用户鉴权

[【文档】用户鉴权模块](#)

- 鉴权

`x-stream-id` 类似 `session_id`

▼ Request Headers

:authority: api.local.hzmantu.com
:method: GET
:path: /oa_project/manage/organization/job/all?withDel=true
:scheme: https
accept: application/json, text/plain, */*
accept-encoding: gzip, deflate, br
accept-language: zh-CN,zh;q=0.9,en;q=0.8
cookie: experimentation_subject_id=ImFlZDc2YTY1LTY4MjYtNDkxOS0.
Afw
origin: https://fed.dev.hzmantu.com
referer: https://fed.dev.hzmantu.com/ops-hrms-system/
sec-fetch-mode: cors
sec-fetch-site: same-site
user-agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_0) App
x-stream-id: sGL24T4iW5hpjTU602YRjkfTMC6cAAfw

The screenshot shows the Chrome DevTools Application tab. On the left, the 'Local Storage' section is expanded, and the entry for 'https://fed.dev.hzmantu.com' is selected. The main pane displays a table with two columns: 'Key' and 'Value'. The 'x-stream-id' key is highlighted, with its value being a JSON object: {"expire":1573755600147,"value":"sGL24T4iW5hpjTU602YRjkfTMC6cAAfw"}. Below the table, the JSON object is expanded, showing the 'expire' and 'value' properties.

Key	Value
userInfo	{"id":611867,"name":"何斌","dingding_uid":"1211136929655575","nickname":"波特","department_id":1}
x-stream-id	{"expire":1573755600147,"value":"sGL24T4iW5hpjTU602YRjkfTMC6cAAfw"}

▼ {expire: 1573755600147, value: "sGL24T4iW5hpjTU602YRjkfTMC6cAAfw"}
expire: 1573755600147
value: "sGL24T4iW5hpjTU602YRjkfTMC6cAAfw"

- 获取用户信息

```
public function addActivity (RpcContext $context) {  
    $session = $context->getSession();  
    $staffNum = $session->get('manage_staffid');  
    $staffType = $session->get('manage_type');  
    ...  
}
```

- 权限管理

@RpcAuthority

```
/**  
 * @Alias(name="活动取消报名")  
 * @RpcApi(method="POST",  
url="/manage/spaceStation/activity/cancelActivitySignup")
```

```

    * @RpcParam(name="id", type="uint", comment="活动记录id",
require=true)
    *
    *
    @RpcAuthority(need="manage.210.partner.space_station.activity.mem
ber.manage")
    *
    * @param RpcContext $context
    * @param $id
    * @return void
    * @throws Throwable
    */
    public function cancelActivitySignup (RpcContext $context, $id) {
        $manageStaffId = $context->getSession()-
>get('manage_staffid');    //当前签到人员

        return app('staffRecordService')::cancelActivitySignup($id,
$manageStaffId);
    }

```

H3 控制器层

- 获取请求参数 @RpcParam

```

/**
    * @Alias(name="活动成员列表")
    * @RpcApi(method="GET",
url="/manage/spaceStation/activity/listActivityStaff")
    * @RpcParam(name="id", type="uint", comment="活动id",
require=true)
    * @RpcParam(name="staff", type="string", comment="姓名, 花名, 或工
号")
    * @RpcParam(name="isSignin", type="bool", comment="签到状态")
    * @RpcParam(name="isSignup", type="int", comment="报名状态, 不传查
询all, 1 表报名, 0 表未报名, 2 表已取消")
    * @RpcParam(name="page", type="uint", default=1, comment="页码")
    * @RpcParam(name="pageSize", type="uint", default=10,
comment="每页条数")
    *
    *
    @RpcAuthority(need="manage.210.partner.space_station.activity.mem
ber.manage")
    *
    * @param RpcContext $context
    * @param $id
    * @param $page
    * @param $pageSize

```

```

* @return array
*/
public function getActivityStaffList (RpcContext $context, $id,
$page, $pageSize) {
    $staffIds = [];
    if ($context->has('staff')) {
        $staff = $context->input('staff');
        if (is_numeric($staff)) {
            $staffIds[] = $staff;
        } else {          //获得staffIds
            $staffIds =
app('staffRecordService')::getStaffIdByNameOrNickname($staff);
        }
    }

    $whereIn = [];
    $where[] = ['activity_id', $id];

    if ($staffIds) {
        $whereIn[] = ['staff_id', $staffIds];
    }

    if ($context->has('isSignin')) {
        $where[] = ['is_signin', $context->input('isSignin')];
    }

    if ($context->has('isSignup')) {
        $where[] = ['is_signup', $context->input('isSignup')];
    }
}

```

- 获取参数: `$context->input('staff');`

H3 利用反射，自动通过注释生成文档

- PHP 利用反射机制自动生成文档

`\Mainto\RpcServer\Providers\RpcServerServiceProvider::register`

```

$loader = new RpcAnnotationLoader();
AnnotationRegistry::registerLoader([$loader, "loadClass"]);

```

H2 核心基础框架 himo-rpc-framework

H3 服务入口:

H4 服务注册: minio S3 + etcd

Minio是一个对象存储服务（代表性的对象储存系统有Amazon S3、阿里云 OSS。）

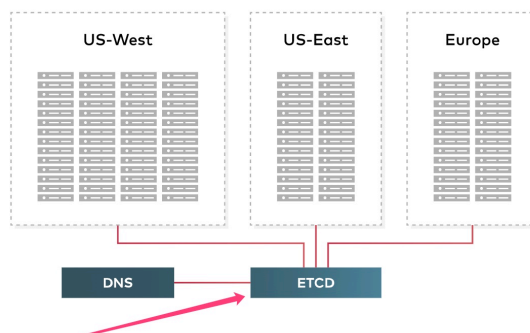
- 启动服务

```
php artisan rpc:agent start
```

<https://min.io/>

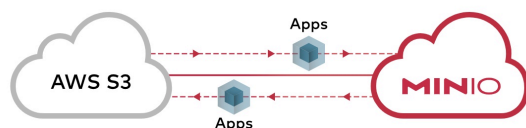
Scalability

MinIO leverages the hard won knowledge of the web scalers to bring a simple scaling model to object storage. This accompanies a strongly held belief that “simple things scale.” At MinIO, scaling starts with a single cluster which can be federated with other MinIO clusters to create a global namespace, spanning multiple data centers if needed. Expansion of the namespace is possible by adding more clusters, more racks until the goal is achieved.



MinIO利用了Web缩放器的来之不易的知识，为对象存储带来了简单的缩放模型。这伴随着“简单的东西可以扩展”的坚定信念。在MinIO上，扩展从单个集群开始，该集群可以与其他MinIO集群联合以创建全局命名空间，并在需要时跨越多个数据中心。通过添加更多集群，更多机架直到实现目标，可以扩展命名空间。

- 系统的 minio S3 网关 <https://s3.code.hzmantu.com/minio/login>



Amazon S3 Compatibility

Amazon's S3 API is the defacto standard in the object storage world and represents the most modern storage API in the market. MinIO adopted S3 compatibility early on and was the first to extend it to support S3 Select. MinIO prides itself on the comprehensive nature of its compatibility and points to the fact that more than 750 organizations, including Microsoft Azure use MinIO's S3 Gateway - more than the rest of the industry combined.

对象储存是将文件按对象储存, 每一个对象包含文件原始数据与元数据. 综合了块储存与文件储存的优势, 具有速度快, 方便共享。代表性的对象储存系统有Amazon S3、阿里云 OSS。minio是一个开源的对象储存系统，支持Windows、Linux平台，兼容、Amazon S3 API。

H4 服务监听: workman + etcd + k8s

src/Command/RpcServer.php

src/RpcServer/RpcServerWorkerMode.php

- 启动服务

```
php artisan rpc:server start
```

内部执行流程：启动 k8s → 启动 etcd 服务 → 注册服务

```

/**
 * RpcServer constructor.
 *
 * @param bool $daemon
 */
private function __construct ($daemon = false) {
    parent::__construct();

    $address = config('rpc-server.listen');
    $port = config('rpc-server.port');

    $this->daemon = $daemon;
    $this->listenAddress = "tcp://{ $address }:{ $port }";
    $this->workerNum = config('rpc-server.work_num');
    $this->kubernetesMode = !!env('KUBERNETES_SERVICE_HOST');
    self::$verboseMode = config('rpc-server.verbose_mode');

    Log::info("init workerNum = { $this->workerNum }");
}

```

H3 路由：反射 ReflectionClass

src/RpcServer/RpcRouter.php

- 注册路由文件 `/himo-training/config/app.php`

```

'RpcRouter' =>
\Mainto\RpcServer\RpcServer\RpcRouterFacade::class,

```

- 使用路由方法，注册对应的控制器 `/himo-training/routes/rpc.php`

```

RpcRouter::register(\App\Rpc\Controllers\ExampleController::class
);

```

- 核心方法： `new ReflectionClass` （通过 `反射`，获取对应控制器文件的 `类`、`方法`、`__construct` 参数、`URL` 等，然后将方法和参数放入 `大数组`）

`\Mainto\RpcServer\Providers\RpcServerServiceProvider::register`

```

$loader = new RpcAnnotationLoader();
AnnotationRegistry::registerLoader([$loader, "loadClass"]);

```



```

/**
 * 注册一个RPC路由
 *
 * @param string $class
 * @param string|null $alias
 */
public function register (string $class, string $alias = null) {
    try {
        $refClass = new ReflectionClass($class);
        if (!$alias) {
            $alias = $refClass->getName();
            $pos = strrpos($alias, 'Controllers\\');
            if ($pos !== false) {
                $alias = substr($alias, $pos + 12);
            } else {
                throw new RuntimeException($class.'not has alias
and path error');
            }
        }

        $this->aliasMap[$class] = $alias;
        $this->addClass($refClass, $alias);
    } catch (ReflectionException $e) {
        /** @var RuntimeException $e */
        throw $e;
    }
}

```

- 通过上面的类大数组遍历，获取对应方法的注解

```

// doctrine/annotations 组件，用于获取和解析类的方法的注解
$this->annotationReader = new AnnotationReader();
...
// 获取方法的注解
$annotations = $this->annotationReader-
>getMethodAnnotations($method);

// 校验参数
$rpcParameter = new RpcParameter();
foreach ($parameters as $key => $parameter) {
    $rpcParameter->addParameter($parameter);
}

```

H3 消息通讯 rabbitMQ:

H4 服务解耦：MQ 消息队列的 推送 / 获取

- 消费者 `@RpcMessageHook(name="staff:department-create")`

```
/**
 * @Alias(name="新增部门")
 * @RpcMessageHook(name="staff:department-create")
 * @RpcParam(name="departmentId", type="int", comment="部门id",
require=true)
 * @RpcParam(name="name", type="string", comment="部门名称",
require=true)
 * @RpcParam(name="parentId", type="int", comment="部门id",
require=true)
 * @RpcParam(name="type", type="int", comment="部门类型",
default=0)
 * @RpcParam(name="subjectId", type="int", comment="主体id",
require=true)
 * @RpcParam(name="costType", type="int", comment="费用类型",
require=false)
 * @param RpcContext $context
 * @return bool
 * @throws ReflectionException
 */
public function createDepartment (RpcContext $context) {
    return self::$rocketMqService::getInstance()->getProducer()-
>pushMessage(
        '\App\Services\Organization\DepartmentService',
        'add',
        $context->all()
    );
}
```

- 生产者 `RpcMessageQueue::getInstance()->addMessageToQueue`

```
/**
 * @param Department $dep
 * @throws Exception
 */
public function created (Department $dep) {
    $this->createDingTalkDep($dep);
}
```

```

        RpcMessageQueue::getInstance() -
>addMessageToQueue( 'staff:department-create', [
    'department_id' => $dep->id,
    'departmentId' => $dep->id,
    'name'          => $dep->name,
    'parentId'      => $dep->parent ?? 0,
    'type'          => $dep->dep_type,
    'subjectId'     => $dep->subject_id,
    'costType'      => $dep->cost_type,
]);

    DepartmentService::clearCache();

}

```

```

/**
 * 消息推送
 *
 * @RpcApi(method="POST", url="/api/message_push")
 * @RpcParam(name="delay", type="uint", comment="延迟时间（可以不
传）")
 * @param RpcContext $context
 * @return string
 */
public function addMessage (RpcContext $context) {
    $queue = RpcMessageQueue::getInstance();
    if ($context->has('delay')) {
        $queue->sendDelayMessage($context->input('delay'),
'test:message_test', $context->all());
    } else {
        $queue->addMessageToQueue('test:message_test', $context-
>all());
    }

    return Carbon::now();
}

/**

```

```

* 消息测试
*
* @RpcMessageHook(name="test:message_test")
*
* @param RpcContext $context
*/
public function messageTest (RpcContext $context) {
    Cache::put("message1", [
        'time'      => Carbon::now(),
        'data'      => $context->all(),
        'is_delay'   => $context->isDelay(),
        'delay_time' => $context->getDelayTime(),
        'is_retry'   => $context->isRetry(),
    ], 600);
}

/**
* 消息测试
*
* @RpcMessageHook(name="test:message_test")
*
* @param RpcContext $context
*/
public function messageTest2 (RpcContext $context) {
    Cache::put("message2", [
        'time'      => Carbon::now(),
        'data'      => $context->all(),
        'is_delay'   => $context->isDelay(),
        'delay_time' => $context->getDelayTime(),
        'is_retry'   => $context->isRetry(),
    ], 600);
}

/**
* 获得消息推送日志
*
* @RpcApi(method="GET", url="/api/message_push")
*
* @param RpcContext $context
* @return array
*/
public function getMessageQueueLog (RpcContext $context) {
    return [
        'message1' => Cache::get("message1"),
        'message2' => Cache::get("message2"),
    ];
}

```

H4 简易聊天室：广播 broadcast

```
/**
 * 简易聊天室
 *
 * @RpcApi(method="GET", url="/api/chat")
 * @RpcMessageHook(name="ws.demo_chat")
 * @param RpcContext $context
 * @param $chat
 * @return array|null
 * @throws \Psr\SimpleCache\InvalidArgumentException
 */
public function chatPoll (RpcContext $context) {
    if ($context->isRpcMessageHookRequest()) {
        $cacheKey = "message.{$context->getUserId()}";
        if ($context->getMsgType() == "control") {
            if ($context->input('type') == "connect") {
                Cache::put($cacheKey, $context->input('options'),
86400);
            } else {
                Cache::delete($cacheKey);
            }

            $context->broadcastMessage(json_encode([
                "type" => "control",
                "userId" => $context->getUserId(),
                "content" => $context->input('type'),
                "options" => $context->input('options'),
            ]));
        } else {
            $context->broadcastMessage(json_encode([
                "type" => "message",
                "userId" => $context->getUserId(),
                "content" => $context->input('chat'),
                "options" => Cache::get($cacheKey, []),
            ]));
        }

        dump($context->all());
        return null;
    } else {
        $roomName = "demo_chat";
        $alias = "demo_chat.{$context->input('room', 'public')}";
        $expired = Carbon::now()->addDay()->timestamp;
        $check = base64_encode(hex2bin(md5("{$roomName}.{$alias}.
{$expired}).luty.websocket.check"));
```

```

        return [
            "room"    => $roomName,
            "alias"   => $alias,
            "check"   => $check,
            "expired" => $expired,
        ];
    }
}

```

H3 服务注册与发现 etcd + workman

/src/RpcServer/RpcServerWorkerMode.php

H3 端口监听：socket 观察者

vendor/mainto/himo-rpc-framework/src/Command/RpcCluster.php

php的 `socket_create`

H3 etcd 操作

/src/helper.php->get_etcd_client

H3 分布式锁（原子锁）：RpcMutex

\Mainto\RpcServer\RpcUtil\Tool\RpcMutex::getLock（源码地址：
src/RpcUtil/Tool/RpcMutex.php）

/himo-training/app/Rpc/Controllers/Example/ExampleController.php->lockTest

- 使用 原子锁

```

public function click ($staff_num, $lid) {
    $commit = Comment::findOrFail($id);
    $lock = RpcMutex::getLock("click_{$staff_num}_$id");
    return $lock->synchronized(function () use ($staff_num, $id,
    $commit) {
        $sold = CommentClick::whereStaffNum($staff_num)-
        >whereCommentId($id)->first();
        if (!$sold) {
            $click = new CommentClick();
            $click->staff_num = $staff_num;
            $click->comment_id = $id;
            $click->save();
            $commit->click_count++;
            $commit->save();
        }
        return true;
    });
}

```

```
});  
}
```

H3 session

```
/src/RpcServer/ContextTrait/SessionTrait.php  
\Mainto\RpcServer\RpcServer\ContextTrait\SessionTrait::getSession  
\App\Rpc\Controllers\Example\ExampleController::visit  
himo-training /Volumes/code/mainto/app/Rpc/Controllers/Example/  
/src/RpcUtil/RpcSessionBag.php
```

- 使用

```
/**  
 * Session使用示例  
 *  
 * @RpcApi(method="GET", url="/test/visit")  
 * @param RpcContext $context  
 * @return int  
 * @throws \Exception  
 */  
public function visit (RpcContext $context) {  
    $session = $context->getSession();  
    return $session->increment("visit");  
}
```

H3 参数校验 @RpcParam (反射)

```
src/RpcUtil/RpcParameter.php
```

```
/**  
 * @RpcParam(name="wish_value", type="uint", comment="愿望值",  
 validation="required|min:1")  
 * @RpcParam(name="staff_num", type="uint", comment="工号",  
 require=true)  
 * @RpcParam(name="apply_in", type="string", comment="应用于",  
 require=true)  
 */
```

- 实际是在路由方法里实现

```
\Mainto\RpcServer\RpcServer\RpcRouter::addMethod  
(src/RpcServer/RpcRouter.php)
```

```
// 对参数反射进行注册
$rpcParameter = new RpcParameter();
foreach ($parameters as $key => $parameter) {
    $rpcParameter->addParameter($parameter);
}
```

- 通过 laravel 自带的 validator 来校验 `src/RpcUtil/RpcParameter.php`

```
if ($this->enableValidationCheck && $this->validationMap) {
    $validator = Validator::make($request->all(), $this->validationMap, [], []);

    if ($validator->fails()) {
        throw new ValidationException($validator);
    }
}
```

H3 抛异常 RpcRuntimeException (反射)

himo-training /Volumes/code/mainto/app/Rpc/Controllers/Example/

```
if (!$departmentPermissions) {
    throw SuggestionException::DEPARTMENT_PERMISSION_NOT_FOUND();
}

throw new RpcRuntimeException("error", 0xE00001001);
```

H3 日志记录: 阿里云 sls

H3 定时任务 @RpcCron (反射)

himo-training /Volumes/code/mainto/app/Rpc/Controllers/Example/

```
/**
 * @RpcCallWay(only="Http")
 * @RpcCron(spec="*\5 * * * * ?")
 */
public function cronTest () {
    Cache::put("cron_1", Carbon::now(), 600);
}

/**
 * @RpcCallWay(only="Rpc")
 * @RpcCron(every="1m")
```



```

*/
public function cronTest2 () {
    Cache::put("cron_2", Carbon::now(), 600);
}

/**
 * @deprecated
 * @RpcCron(entry="hourly")
 */
public function cronTest3 () {
    Cache::put("cron_3", Carbon::now(), 600);
}

/**
 * 获得定时任务执行日志
 * @RpcApi(method="GET", url="/api/cron_log")
 */
public function getCronLog () {
    return [
        "cron_1" => Cache::get("cron_1"),
        "cron_2" => Cache::get("cron_2"),
        "cron_3" => Cache::get("cron_3"),
    ];
}

```

H3 自定义 command 脚本

H4 生成 composer 的 SDK 组件

src/Command/RpcSdkDump.php

原理：`Router::dump` 里的 `$this->methodsMap` 读取路由对应的方法数组

H3 配置文件

H4 默认存在的配置文件

src/config.php

可以查看框架主要用来哪些第三方服务，如下：

- session 驱动：gear-store
- 日志：aliyun sls
- 文档解析：micro_doc <https://doc.local.hzmantu.com>
- 消息队列：rabbitmq
- etcd 服务

H4 通过命令行生成的配置文件

```
php artisan vendor
```

```
Do you want to run "vendor:publish" instead? (yes/no) [no]:
> yes

Which provider or tag's files would you like to publish?:
[0 ] Publish files from all providers and tags listed below
[1 ] Provider: App\Providers\IdeHelperServiceProvider
[2 ] Provider: Fideloper\Proxy\TrustedProxyServiceProvider
[3 ] Provider: Illuminate\Foundation\Providers\FoundationServiceProvider
[4 ] Provider: Illuminate\Mail\MailServiceProvider
[5 ] Provider: Illuminate\Notifications\NotificationServiceProvider
[6 ] Provider: Laravel\Tinker\TinkerServiceProvider
[7 ] Provider: Mainto\RpcServer\Providers\RpcServerServiceProvider
[8 ] Tag: config
[9 ] Tag: laravel-errors
[10] Tag: laravel-mail
[11] Tag: laravel-notifications
> 8

Copied File [/vendor/mainto/himo-rpc-framework/src/config.php] To [/config/rpc-server.php]
Publishing complete.
→ himo-export git:(release-2.4.1-feature/ht_add_courses_detail) x
```

H3 配置中心

神符推荐用: Apollo

H2 laravel 相关

H3 控制器层

- 参数获取

```
// 从请求中获取全部信息
$context->all()
// 获得注解中声明的参数
$context->onlyDeclare();
// 转换成下划线
$params = self::$commonService::transformKeysToLower($context->onlyDeclare());

// 获取 session
$staffId = $context->getSession()->get('manage_staffid');
```

- 注解

```
# 默认值 default=0
@RpcParam(name="type", type="string", comment="部门类型",
default=0)

# 权限 or
```

- ExampleController.php

```
<?php
/**
 * Created by PhpStorm.
 * User: jiuli
 * Date: 2018/3/16
 * Time: 上午10:03
 */

namespace App\Rpc\Controllers\Example;

use Carbon\Carbon;
use Illuminate\Support\Facades\Cache;
use Mainto\RpcServer\Base\Controller;
use Mainto\RpcServer\Exceptions\RpcRuntimeException;
use Mainto\RpcServer\RpcAnnotations\RpcApi;
use Mainto\RpcServer\RpcAnnotations\RpcCallWay;
use Mainto\RpcServer\RpcAnnotations\RpcCron;
use Mainto\RpcServer\RpcAnnotations\RpcHeader;
use Mainto\RpcServer\RpcAnnotations\RpcMessageHook;
use Mainto\RpcServer\RpcAnnotations\RpcParam;
use Mainto\RpcServer\RpcAnnotations\RpcResponseHeader;
use Mainto\RpcServer\RpcServer\RpcContext;
use Mainto\RpcServer\RpcUtil\RpcMessageQueue;
use Mainto\RpcServer\RpcUtil\Stream\RpcStreamAbstract;
use Mainto\RpcServer\RpcUtil\Stream\RpcStreamProviderInterface;
use Mainto\RpcServer\RpcUtil\Tool\RpcMutex;

class ExampleController extends Controller {
    /**
     * say hello to client
     * more doc
     * more doc
     *
     * @RpcApi(method="GET", url="/api/test")
     * @RpcParam(name="name", type="string", comment="返回的姓名",
require=true, validation="min:4")
```

```

    * @RpcHeader(name="Content-Type")
    *
    * @param RpcContext $context
    * @param string $name
    * @return string
    */
    public function sayHello (RpcContext $context, $name =
"world") {
        return "hello $name";
    }

    /**
     * test error
     */
    public function errorExample () {
        throw new RpcRuntimeException("error", 0xE00001001);
    }

    /**
     * @RpcCallWay(only="Http")
     * @RpcCron(spec="*\5 * * * * ?")
     */
    public function cronTest () {
        Cache::put("cron_1", Carbon::now(), 600);
    }

    /**
     * @RpcCallWay(only="Rpc")
     * @RpcCron(every="1m")
     */
    public function cronTest2 () {
        Cache::put("cron_2", Carbon::now(), 600);
    }

    /**
     * @deprecated
     * @RpcCron(entry="hourly")
     */
    public function cronTest3 () {
        Cache::put("cron_3", Carbon::now(), 600);
    }

    /**
     * 获得定时任务执行日志
     * @RpcApi(method="GET", url="/api/cron_log")
     */
    public function getCronLog () {

```

```

        return [
            "cron_1" => Cache::get("cron_1"),
            "cron_2" => Cache::get("cron_2"),
            "cron_3" => Cache::get("cron_3"),
        ];
    }

    /**
     * stream input by client
     *
     * @param RpcContext $context
     */
    public function inputUserInfo (RpcContext $context) {
        $context->switchToStreamMode(new class extends
RpcStreamProviderInterface {
            private $question = [
                'name' => '',
                'age'  => '',
                'sex'  => '',
            ];

            public function nextQuestion (RpcStreamAbstract
$message, $message) {
                if ($message) {
                    list($item, $value) = $message;
                    if (isset($this->question[$item])) {
                        $this->question[$item] = $value;
                    }
                }

                $hasQuestion = false;
                foreach ($this->question as $type => $value) {
                    if (!$value) {
                        $hasQuestion = true;
                        $stream->send(["please input your
{$type}: ", $type]);
                        break;
                    }
                }

                if (!$hasQuestion) {
                    $ans = "";
                    foreach ($this->question as $type => $value)
{
                        $ans .= "your {$type} is {$value} \n";
                    }
                }
            }
        });
    }
}

```

```

        $stream->close($ans."bye.\n");
    }
}

    public function onMessageRecv (RpcStreamAbstract
$stream, $message) {
        $this->nextQuestion($stream, $message);
    }

    public function onStreamStart (RpcStreamAbstract
$stream) {
        $this->nextQuestion($stream, null);
    }
}));
}

/**
 * 下载文件
 *
 * @RpcApi(method="GET", url="/file/download")
 * @RpcResponseHeader(name="Content-Type", value="os/stream;
charset=utf-8")
 * @RpcResponseHeader(name="Content-Disposition",
value="attachment; filename=download.txt")
 *
 * @param RpcContext $context
 */
    public function fileDownload (RpcContext $context) {
        $context->switchToSteamMode(new class extends
RpcStreamProviderInterface {
            private $num = 0;

            private function writeFile (RpcStreamAbstract
$stream) {
                if ($this->num < 1000) {
                    $this->num++;

                    $stream->send($this->num." ");
                } else {
                    $stream->close();
                }
            }
        }

        public function onMessageRecv (RpcStreamAbstract
$stream, $message) {
            $this->writeFile($stream);
        }
    }
}

```

```

    });
}

/**
 * 无锁并发测试
 *
 * @RpcApi(method="GET", url="/test/no_lock")
 * @throws \Psr\SimpleCache\InvalidArgumentException
 */
public function noLockTest () {
    $num = Cache::get("glo_num", 0);
    Cache::set("glo_num", $num + 1, 1000);

    dump($num);
    return $num;
}

/**
 * 有锁并发测试
 *
 * @RpcApi(method="GET", url="/test/lock")
 * @throws \Throwable
 */
public function lockTest () {
    $lock = RpcMutex::getLock("lock_test2");

    return $lock->synchronized(function () {
        $num = Cache::get("glo_num", 0);
        Cache::set("glo_num", $num + 1, 1000);

        dump($num);
        return $num;
    });
}

/**
 * Session使用示例
 *
 * @RpcApi(method="GET", url="/test/visit")
 * @param RpcContext $context
 * @return int
 * @throws \Exception
 */
public function visit (RpcContext $context) {
    $session = $context->getSession();
    return $session->increment("visit");
}

```

```

/**
 * 消息推送
 *
 * @RpcApi(method="POST", url="/api/message_push")
 * @RpcParam(name="delay", type="uint", comment="延迟时间 (可以不传)")
 * @param RpcContext $context
 * @return string
 */
public function addMessage (RpcContext $context) {
    $queue = RpcMessageQueue::getInstance();
    if ($context->has('delay')) {
        $queue->sendDelayMessage($context->input('delay'),
'test:message_test', $context->all());
    } else {
        $queue->addMessageToQueue('test:message_test',
$context->all());
    }

    return Carbon::now();
}

/**
 * 消息测试
 *
 * @RpcMessageHook(name="test:message_test")
 *
 * @param RpcContext $context
 */
public function messageTest (RpcContext $context) {
    Cache::put("message1", [
        'time'      => Carbon::now(),
        'data'      => $context->all(),
        'is_delay'  => $context->isDelay(),
        'delay_time' => $context->getDelayTime(),
        'is_retry'  => $context->isRetry(),
    ], 600);
}

/**
 * 消息测试
 *
 * @RpcMessageHook(name="test:message_test")
 *
 * @param RpcContext $context
 */

```



```

public function messageTest2 (RpcContext $context) {
    Cache::put("message2", [
        'time'      => Carbon::now(),
        'data'      => $context->all(),
        'is_delay'  => $context->isDelay(),
        'delay_time' => $context->getDelayTime(),
        'is_retry'  => $context->isRetry(),
    ], 600);
}

/**
 * 获得消息推送日志
 *
 * @RpcApi(method="GET", url="/api/message_push")
 *
 * @param RpcContext $context
 * @return array
 */
public function getMessageQueueLog (RpcContext $context) {
    return [
        'message1' => Cache::get("message1"),
        'message2' => Cache::get("message2"),
    ];
}

/**
 * 简易聊天室
 *
 * @RpcApi(method="GET", url="/api/chat")
 * @RpcMessageHook(name="ws.demo_chat")
 * @param RpcContext $context
 * @param $chat
 * @return array|null
 * @throws \Psr\SimpleCache\InvalidArgumentException
 */
public function chatPoll (RpcContext $context) {
    if ($context->isRpcMessageHookRequest()) {
        $cacheKey = "message.{$context->getUserId()}";
        if ($context->getMsgType() == "control") {
            if ($context->input('type') == "connect") {
                Cache::put($cacheKey, $context->
>input('options'), 86400);
            } else {
                Cache::delete($cacheKey);
            }

            $context->broadcastMessage(json_encode([

```

```

        "type"      => "control",
        "userId"    => $context->getUserId(),
        "content"   => $context->input('type'),
        "options"   => $context->input('options'),
    ]));
} else {
    $context->broadcastMessage(json_encode([
        "type"      => "message",
        "userId"    => $context->getUserId(),
        "content"   => $context->input('chat'),
        "options"   => Cache::get($cacheKey, []),
    ]));
}

dump($context->all());
return null;
} else {
    $roomName = "demo_chat";
    $alias = "demo_chat.{$context->input('room',
'public')}}";
    $expired = Carbon::now()->addDay()->timestamp;
    $check = base64_encode(hex2bin(md5("{$roomName}.
{$alias}.{$expired}.luty.websocket.check")));

    return [
        "room"      => $roomName,
        "alias"     => $alias,
        "check"     => $check,
        "expired"   => $expired,
    ];
}
}
}
}

```

H3 数据库操作

H4 软删除 & 获取删除的数据

- model 中指定软删除: `use SoftDeletes;`

数据库中添加 `deleted_at` 字段

Model中使用 `SoftDeletes`,具体可参考源码

`Illuminate\Database\Eloquent\SoftDeletes`

```
use Illuminate\Database\Eloquent\SoftDeletes;
class Post extends Model
{
    use SoftDeletes;
    ...
}
```

- 软删除恢复: `->restore()`

```
//恢复单个
Post::withTrashed()->find(1)->restore();
//恢复多个模型
Post::withTrashed()->where('id', '>', 1)->restore();
```

- 获取已经删除的数据: `->withTrashed()`

```
/**
 * 根据ids获取题目数据数组, 含已删除
 * @param $ids
 * @return Question[]|Builder[]|Collection
 */
public function findQuestionsByIdsWithDelete ($ids) {
    return Question::query()
        ->withTrashed()
        ->whereIn('id', $ids)
        ->get()
        ->toArray();
}
```

H4 自己封装的 where (包括 in)

training-project \App\Services\CommonService::queryBuilder

```
/**
 * @Alias(name="处理laravel的where查询")
 * @param $where
 * @param Builder $builder
 * @return Builder
 */
public static function queryBuilder ($where, Builder $builder) {
    /**
     * @example in ['id', 'in', [1, 2, 3]]
     * @example = ['id', '=', 1]
     */
    foreach ($where as $item) {
        list($column, $operator, $value) = $item;
```

```

        if ($operator == 'in') {
            $builder->whereIn($column, $value);
        } elseif ($operator == 'not in') {
            $builder->whereNotIn($column, $value);
        } elseif ($operator == 'between') {
            $builder->whereBetween($column, $value);
        } else {
            $builder->where($column, $operator, $value);
        }
    }

    return $builder;
}

```

H4 列表，同时获取 total 和 data

```

/**
 * 根据条件分页获取任务信息，附加：分组信息，根据创建时间倒序
 * @param array $where
 * @param int $page
 * @param int $page_size
 * @return array
 */
public function searchTasksByPageDescByCreatedAtWithGroups (array
$where, int $page, int $page_size) {
    $task = Task::query()->with('groups:task_id,group_id');

    $pageMeta = CommonService::queryBuilder($where, $task)
        ->orderByDesc('created_at')
        ->paginate($page_size, ['*'], 'page', $page);

    return [
        'total' => $pageMeta->total(),
        'data' => $pageMeta->items(),
    ];
}

```

H3 数据填充 seeds

老数据迁移填充：/training-project/database/seeds/TrainSeeder.php

H3 微服务 composer 组件桥

H4 组件桥 调取方式

```
return Staff::getDirectClass()->getStaffIdsByParams([
    'deptIds' => $deptIds,
    'withDel' => true,
]);
```

H4 获取 服务列表 的接口

<http://127.0.0.1:3080>

X-DEBUG-COMMAND : dump_info

http://127.0.0.1:3080

OPTIONS ▼ http://127.0.0.1:3080

Params Authorization Headers (1) Body Pre-request Script Tests

KEY	VALUE
<input checked="" type="checkbox"/> X-DEBUG-COMMAND	dump_info
Key	Value

Body Cookies Headers (7) Test Results

Pretty Raw Preview JSON ↻

```

1 {
2   "msg": {
3     "Business": {
4       "DELETE": [
5         "/business/manager/orders/delete",
6         "/business/manager/roles/delete",
7         "/business/customer/receiving_addresses/delete",
8         "/business/manager/bg_colors/delete",
9         "/business/manager/price_areas/delete",
10        "/business/manager/products/delete",
11        "/business/customer/invoices/delete",
12        "/business/manager/staffs/delete"
13      ],

```

```
{
  "msg": {
    "Business": {
      "DELETE": [
        "/business/manager/orders/delete",
        "/business/manager/roles/delete",
        "/business/customer/receiving_addresses/delete",
        "/business/manager/bg_colors/delete",
        "/business/manager/price_areas/delete",
        "/business/manager/products/delete",
        "/business/customer/invoices/delete",
        "/business/manager/staffs/delete"
      ],
      "GET": [
        "/business/customer/invoices",
        "/business/common/get_area",
        "/business/manager/roles/get_all_permissions",
        "/business/customer/photo"
      ]
    }
  }
}
```

```
s/show", "/business/manager/products/show", "/business/manager/contracts", "/business/manager/roles", "/business/manager/bg_colors", "/business/common/get_cover_list", "/business/manager/contract_invoices/show", "/business/manager/staffs", "/business/common/get_manager_info", "/business/customer/contracts", "/business/manager/role_lists", "/business/manager/reservations/show", "/business/manager/orders/show", "/business/customer/account/sign_out", "/business/customer/receiving_addresses", "/business/common/get_full_name", "/business/customer/orders/show", "/business/manager/permissions", "/business/manager/photos/show", "/business/manager/contracts/show", "/business/common/get_city", "/business/common/get_upyun_sign", "/business/manager/list_products", "/business/common/get_host", "/business/customer/contracts/show", "/business/manager/contract_invoices", "/business/manager/reservations", "/business/manager/photos", "/business/common/get_all_province", "/business/common/get_store", "/business/manager/products", "/business/manager/price_areas", "/business/customer/photos", "/business/manager/payment_records", "/business/manager/performances", "/business/common/get_staff_by_store", "/business/manager/orders"], "POST":  
[ "/business/manager/roles", "/business/customer/contract_invoices", "/business/manager/contracts/audit_contract", "/business/customer/account/wind_control", "/business/manager/contracts/close_contract", "/business/manager/contracts", "/business/common/search_staff_by_params", "/business/customer/receiving_addresses", "/business/manager/price_areas", "/business/customer/account/register", "/business/manager/orders/plus_close_order", "/business/common/shoot_area_query", "/business/manager/orders/close_order", "/business/manager/account/account_verification", "/business/manager/orders/bind_himo_order", "/business/manager/bg_colors", "/business/customer/account/reset_password", "/business/manager/orders", "/business/manager/performances", "/business/manager/contracts/upload_contract", "/business/customer/account/check_code", "/business/manager/contracts/plus_close_contract", "/business/customer/account/update_user_profile", "/business/customer/account/send_code", "/business/manager/orders/add_performances", "/business/manager/products/add_prices", "/business/manager/staffs/search_staff", "/business/customer/account/check_old_pwd", "/business/common/get_shooting_area_full_name", "/business/manager/orders/audit_order", "/business/manager/staffs", "/business/manager/payment_records", "/business/customer/reservations", "/business/manager/products", "/business/customer/account/show_user_information", "/business/manager/account/show_user_info_management", "/business/customer/invoices"], "PUT":  
[ "/business/manager/bg_colors/update", "/business/manager/contracts/update_plus", "/business/manager/contract_invoices/update", "/business/manager/price_areas/update", "/business/manager/orders/update_my_own", "/business/manager/roles/update", "/business/manager/staffs/update", "/business/customer/invoices/update", "/business/manag
```

```
er/orders/update_plus", "/business/manager/products/update", "/business/customer/receiving_addresses/update", "/business/manager/contracts/update", "/business/manager/orders/update"]}, "CloudSpotCheck": {"GET": ["/cloud_spot_check/spot_check/get_grade_list", "/cloud_spot_check/spot_check/get_spot_check_grade_info", "/cloud_spot_check/staff/get_manager_info", "/cloud_spot_check/spot_checks", "/cloud_spot_check/upyun/get_host_prefix", "/cloud_spot_check/common/join_spot_check", "/cloud_spot_check/spot_check/get_spot_check_list", "/cloud_spot_check/spot_check/get_info", "/cloud_spot_check/spot_check/spot_checks_of_mine", "/cloud_spot_check/spot_check/get_store_types", "/cloud_spot_check/spot_check/get_titles", "/cloud_spot_check/spot_check/export", "/cloud_spot_check/spot_check/get_grade_items", "/cloud_spot_check/spot_check/get_products_by_spot_id"], "POST": ["/cloud_spot_check/spot_check/update_spot_check", "/cloud_spot_check/spot_check/get_products_by_store", "/cloud_spot_check/common/cancel_spot_check", "/cloud_spot_check/spot_check/record_participants", "/cloud_spot_check/spot_checks", "/cloud_spot_check/spot_check/get_stores_by_types", "/cloud_spot_check/upload_covers", "/cloud_spot_check/spot_check/is_agree_grades", "/cloud_spot_check/spot_check/finish_spot_check", "/cloud_spot_check/spot_check/grades"]}, "CoreGear": {"GET": ["/core_gear/rsa_random/get_info", "/core_gear/rsa_random/create_range", "/core_gear/rsa_random/create", "/util/getUniqueIdRange", "/core_gear/util/getServerTime", "/util/getUniqueID"]}, "DataCenter": {"GET": ["/data_center/photography/enjoy/getList", "/data_center/himo/feedback/getList", "/data_center/deposits/info", "/data_center/photography/enjoy/getInfo", "/data_center/deposits/search", "/data_center/mainto_official/media_contact/getList", "/data_center/himo/banner/getInfo", "/data_center/himo/feedback/getInfo", "/data_center/himo/faq/getList", "/data_center/deposits/getType", "/data_center/himore/faq/getList", "/data_center/himo/faq/getInfo", "/data_center/photography/banner/getList", "/data_center/erp/active_page/getInfo", "/data_center/mainto_official/media_contact/getInfo", "/data_center/performance/search", "/data_center/himo/banner/getList", "/data_center/erp/active_page/getListByPage", "/data_center/himore/faq/getInfo", "/data_center/deposits/getOtherStores", "/data_center/photography/banner/getInfo"], "POST": ["/data_center/himo/feedback/batchTag", "/data_center/erp/active_page/create", "/data_center/performance/update", "/data_center/himo/faq/update", "/data_center/photography/enjoy/update", "/data_center/store/sold", "/data_center/store/inbounding", "/data_center/himo/feedback/delete", "/data_center/template/create", "/data_center/photography/banner/create", "/data_center/himore/faq/delete", "/data_center/store/received", "/data_center/store/selling", "/data_center/store/getLogList", "/data_center/himore/faq/create", "/data_center/h
```

```
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```

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cherOrgWithProduct", "/project_cloud/productApi/getProductInfo", "/project_cloud/streamApi/batchGetStreamInfo", "/project_cloud/streamApi/getStreamInfo", "/project_cloud/staff/getRoleList", "/project_cloud/operator/getPhotographerOrgInfo", "/project_cloud/common/getAllRetouchClass", "/project_cloud/operator/getWholeQuota", "/project_cloud/photoManager/getHost", "/project_cloud/staff/getStaffInfo", "/project_cloud/common/getSelfStaffs", "/project_cloud/operator/getCloudRetoucherQuota", "/project_cloud/operator/getRetouchOrgList", "/project_cloud/config/getImpulseInfo", "/project_cloud/photoApi/batchPhotosAndPages", "/project_cloud/operator/getRetouchOrgIncome", "/project_cloud/common/getAllProduct", "/project_cloud/common/getProductInfo", "/project_cloud/operator/getRetouchOrgInfo", "/project_cloud/common/getRetouchOrgs", "/project_cloud/retoucher/getRankInfo", "/project_cloud/operator/getReviewStreamList", "/project_cloud/product/getProductInfo", "/project_cloud/staff/getRetoucherClassList", "/project_cloud/operator/getReviewQuota", "/project_cloud/operator/getStreamInfo", "/project_cloud/checkPool/getSpotCheckResult", "/project_cloud/photoManager/getSignature", "/project_cloud/common/getRetoucherGroup", "/project_cloud/reviewLeader/getReviewList", "/project_cloud/config/getGreenChannelInfo", "/project_cloud/photoPool/getPhotoInfo", "/project_cloud/config/getSuggestWorkload", "/project_cloud/operator/getStreamTimesQuota", "/project_cloud/common/getAllRole", "/project_cloud/common/getSelfInfo", "/project_cloud/config/getHourGlassList", "/project_cloud/staff/staffLevelUp", "/project_cloud/photoApi/firstPhotoInfoById", "/project_cloud/common/getCloudRetoucher", "/project_cloud/common/tR", "/project_cloud/checkPool/getSearchHistory", "/project_cloud/common/delQ", "/project_cloud/photographerOrgApi/getPhotographerOrgInfo", "/project_cloud/common/getRetoucherOrg", "/project_cloud/staff/getStaffPermission", "/project_cloud/retouchOrgApi/getSelfInfo", "/project_cloud/retouchLeader/getGroupStaffTodayQuotaList", "/project_cloud/operator/getStreamList", "/project_cloud/orderApi/getOrderInfo", "/project_cloud/retoucher/getLittleBeeInfo", "/project_cloud/common/getReviewer", "/project_cloud/config/getHourGlassInfo", "/project_cloud/photoPool/getAttitudePhotoInfo", "/project_cloud/checkPool/getStatistics", "/project_cloud/retoucher/haveReworkStream", "/project_cloud/photoApi/batchGetPhotoInfoById", "/project_cloud/common/getAuthority", "/project_cloud/retouchLeader/getStaffRetouchList", "/project_cloud/retoucher/getSelfBuffInfo", "/project_cloud/productApi/getProductListByIds", "/project_cloud/common/getPhotographerOrg", "/project_cloud/retoucher/getRetouchQuotaList", "/project_cloud/retouchLeader/getGroupStaffQuotaInfo", "/project_cloud/retoucher/getStreamQueueInfo", "/project_cloud/retoucher/getProps"], "POST": ["/project_cloud/operator/addRetouchOrg", "/project_cloud/staff/addStaff", "/project_cloud/orderApi/createOrder", "/project_cloud/product/refuseProduct", "/project_cloud/productApi/disableProduct", "/project_cloud/checkPool/commitHistory", "/project_cloud/config/add
```

```
Impulse", "/project_cloud/config/addImpulseSettingItem", "/project_
cloud/productApi/addProduct", "/project_cloud/streamApi/createStre
am", "/project_cloud/operator/addPhotographerOrg", "/project_cloud/
product/getProductList", "/project_cloud/operator/getStoreEvaluate
", "/project_cloud/staff/addRole", "/project_cloud/photoPool/getAtt
itudePhotoList", "/project_cloud/checkPool/fixCheckPoolConfig", "/p
roject_cloud/config/disableImpulse", "/project_cloud/retoucher/exi
tQueue", "/project_cloud/photoPool/submitAttitude", "/project_cloud
/config/addCard", "/project_cloud/streamApi/evaluateStream", "/proje
ct_cloud/checkPool/takePhoto", "/project_cloud/photoPool/getPhotoL
ist", "/project_cloud/config/addHourGlass", "/project_cloud/config/
getImpulseList", "/project_cloud/retoucherApi/exitQueue", "/project
_cloud/photoApi/submitFinalFilm", "/project_cloud/config/getStaffC
ardList", "/project_cloud/operator/getRetoucherQuota", "/project_cl
oud/staff/addRetoucherClass"], "PUT":
[ "/project_cloud/retoucherApi/tagStream", "/project_cloud/reviewer
/joinReviewQueue", "/project_cloud/product/editProduct", "/project_
cloud/common/incrCacheCount", "/project_cloud/productApi/enablePro
duct", "/project_cloud/operator/enablePhotographerOrg", "/project_c
loud/staff/enableStaff", "/project_cloud/retoucher/useProp", "/proj
ect_cloud/operator/urgentStream", "/project_cloud/operator/disable
RetouchOrg", "/project_cloud/operator/modifyStream", "/project_clou
d/retoucherApi/submitStream", "/project_cloud/staff/editStaff", "/p
roject_cloud/reviewer/exitReviewQueue", "/project_cloud/config/edi
tHourGlass", "/project_cloud/config/getSuggestWorkload", "/project_
cloud/retouchLeader/changeGroupStaffWorkLoad", "/project_cloud/ope
rator/enableRetouchOrg", "/project_cloud/common/logStream", "/proje
ct_cloud/retoucher/hangStream", "/project_cloud/config/enableHourG
lassGlobalState", "/project_cloud/config/disableHourGlassGlobalSta
te", "/project_cloud/operator/editRetoucherGroupTargetQuota", "/pro
ject_cloud/staff/editRetoucherClass", "/project_cloud/retoucher/su
bmitStream", "/project_cloud/config/saveGreenChannelInfo", "/projec
t_cloud/config/closeCard", "/project_cloud/retoucher/joinQueue", "/
project_cloud/reviewer/refuseStream", "/project_cloud/staff/disabl
eStaff", "/project_cloud/operator/editRetouchOrg", "/project_cloud/
product/passProduct", "/project_cloud/retoucherApi/receiptStream",
"/project_cloud/staff/editRole", "/project_cloud/operator/disableP
hotographerOrg", "/project_cloud/operator/editPhotographerOrg", "/p
roject_cloud/retoucherApi/joinQueue", "/project_cloud/reviewer/pas
sStream"]], "ProjectCloud3rd": {"GET":
[ "/project_cloud3rd/retoucher/organization/personIncomeList", "/pr
oject_cloud3rd/retoucher/organization/getOrganizationInfo", "/proj
ect_cloud3rd/userInfo", "/project_cloud3rd/photographer/product/na
me/all", "/project_cloud3rd/retoucher/subuser/list", "/project_clou
d3rd/photographer/order/detail", "/project_cloud3rd/photographer/o
rder/list", "/project_cloud3rd/photographer/product/switch", "/proj
ect_cloud3rd/retoucher/organization/retoucherStatistics", "/projec
```

```
t_cloud3rd/retoucher/common/webSocket", "/project_cloud3rd/retoucher/organization/streamList", "/project_cloud3rd/photographer/common/sign/upyun", "/project_cloud3rd/retoucher/organization/qualityStatistics", "/project_cloud3rd/retoucher/retoucher_stream/getRetoucherStream", "/project_cloud3rd/retoucher/subuser/detail", "/project_cloud3rd/photographer/subuser/list", "/project_cloud3rd/photographer/product/detail", "/project_cloud3rd/retoucher/common/sign/getHost", "/project_cloud3rd/photographer/subuser/detail", "/project_cloud3rd/photographer/common/sign/getHost", "/project_cloud3rd/retoucher/order_queue/getOrderQueue", "/project_cloud3rd/photographer/product/list", "/project_cloud3rd/retoucher/organization/incomeDetail", "/project_cloud3rd/retoucher/common/sign/getUpyunSign"], "POST":
[
"/project_cloud3rd/photographer/order/cancel", "/project_cloud3rd/retoucher/subuser/disable", "/project_cloud3rd/retoucher/order_queue/exitQueue", "/project_cloud3rd/photographer/subuser/editUser", "/project_cloud3rd/retoucher/organization/getWaitReviewList", "/project_cloud3rd/retoucher/order_queue/joinQueue", "/project_cloud3rd/photographer/product/add", "/project_cloud3rd/retoucher/organization/pass", "/project_cloud3rd/photographer/order/add", "/project_cloud3rd/retoucher/retoucher_stream/getStatistics", "/project_cloud3rd/retoucher/retoucher_stream/getRetoucherStreamList", "/project_cloud3rd/photographer/product/readd", "/project_cloud3rd/retoucher/subuser/add", "/project_cloud3rd/retoucher/subuser/editUser", "/project_cloud3rd/photographer/subuser/disable", "/project_cloud3rd/photographer/subuser/enable", "/project_cloud3rd/retoucher/retoucher_stream/submitStream", "/project_cloud3rd/photographer/subuser/add", "/project_cloud3rd/retoucher/subuser/enable", "/project_cloud3rd/retoucher/organization/startReview", "/project_cloud3rd/retoucher/organization/return" ]}, "User": { "GET":
[
"/user/checkUserExist" ], "POST":
[
"/user/user/addUserInfo", "/user/api/changeUserInfo", "/user/register", "/user/api/getUserId", "/user/forgetUserPassword", "/user/changeUserPassword", "/user/calcMemberForOne" ]}}, "success": true}
```

###

H2 核心开发人员

H3 查找源头的方法

- git 的历史
- /himo-staff/.env.example 文件最早的 git 发布人
- 看 /vendor/mainto/himo-rpc-framework/src/RpcUtil/ 核心组件创建人

H3 User:jiuli (Git 名称: luty)

H2 本地环境 docker 安装

H3 常用启动命令

```
# docker-compose
cd /Volumes/code/mainto/rpc
docker-compose start
docker-compose restart
docker-compose --version
# mac 兼容脚本, 端口代理
cd /Volumes/code/mainto/project-thinking
./micro-branch-proxy client
# 启动 PHP 服务
cd /Volumes/code/mainto/project-thinking

# docker
docker restart some-api-proxy
docker logs -f some-api-proxy
docker ps
docker rm
69523607c26f4f055faf915d26104ea4c4280f328e5dd031f2500725da72662a
docker container ls
```

H3 方式一：普通 shell 脚本启动

- 【文档】本地Docker环境启动命令【普通docker模式】
- docker_local.sh

```
docker network create micro-local
docker pull registry.cn-hangzhou.aliyuncs.com/mainto_micro/etcd-
service-dev:latest
docker pull registry.cn-
hangzhou.aliyuncs.com/mainto_micro/service-rabbitmq-master:latest
docker pull registry.cn-hangzhou.aliyuncs.com/mainto_micro/api-
proxy-dev:latest

docker run \
-d \
-p 2379:2379 \
-p 2380:2380 \
--name some-etcd \
registry.cn-hangzhou.aliyuncs.com/mainto_micro/etcd-service-
dev:latest
```

```

docker run -d \
--hostname my-rabbit \
--name some-rabbit \
-p 8083:15672 \
-p 5672:5672 \
registry.cn-hangzhou.aliyuncs.com/mainto_micro/service-rabbitmq-
master:latest

docker run -d \
-p 3080:3080 \
-p 3006:3006 \
--name some-api-proxy \
--env='RABBITMQ_USERNAME=guest' \
--env='RABBITMQ_PASSWORD=guest' \
--env='RABBITMQ_SERVER=some-rabbit' \
--env='CONFIG_SERVER=some-etcd:2379' \
registry.cn-hangzhou.aliyuncs.com/mainto_micro/api-proxy-
dev:latest

docker network connect micro-local some-etcd
docker network connect micro-local some-api-proxy
docker network connect micro-local some-rabbit
docker restart some-etcd
docker restart some-api-proxy
docker restart some-rabbit

```

- 清理

```

docker stop some-etcd some-rabbit some-api-proxy
docker rm some-etcd some-rabbit some-api-proxy

```

H3 方式二：docker-compose启动【推荐】

- 本地Docker环境启动命令【docker-compose】
- 安装 docker-compose

```

# Linux 系统
sudo curl -L
"https://github.com/docker/compose/releases/download/1.22.0/docke
r-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-
compose

sudo chmod +x /usr/local/bin/docker-compose

# Mac 系统
安装docker: https://store.docker.com/editions/community/docker-
ce-desktop-mac

```

- docker-compose 常用命令

```
# 初始化
docker-compose up -d
# 启动
docker-compose start
# 停止
docker-compose stop
# 清理
docker stop some-etcd some-rabbit some-api-proxy
docker rm some-etcd some-rabbit some-api-proxy
```

- docker-compose.yml 文件

```
version: '2'
services:
  etcd:
    image: registry.cn-hangzhou.aliyuncs.com/mainto_micro/etcd-
service-dev:latest
    container_name: some-etcd
    ports:
      - "2379:2379" # etcd port
      - "2380:2380" # etcd sync port
    networks:
      - local_micro
  rabbitmq:
    image: registry.cn-
hangzhou.aliyuncs.com/mainto_micro/service-rabbitmq-master:latest
    container_name: some-rabbit
    ports:
      # - "8083:15672" # rabbitmq web manager port
      - "5672:5672" # rabbitmq port
    networks:
      - local_micro
  api-proxy:
    image: registry.cn-hangzhou.aliyuncs.com/mainto_micro/api-
proxy-dev:latest
    container_name: some-api-proxy
    ports:
      - "3080:3080" # api port
      - "3006:3006" # websocket port
    depends_on:
      - "etcd"
      - "rabbitmq"
    environment:
      - RABBITMQ_USERNAME=guest
      - RABBITMQ_PASSWORD=guest
```



```

    - RABBITMQ_SERVER=some-rabbit
    - CONFIG_SERVER=some-etcd:2379
networks:
    - local_micro
branch-proxy:
    image: registry.cn-hangzhou.aliyuncs.com/mainto_micro/micro-branch-proxy-dev:latest
    container_name: some-branch-proxy
    depends_on:
        - "etcd"
        - "api-proxy"
    environment:
        - VERBOSE=true
        - APP_ENV=client
        - ETCD_CONFIG_SERVER=some-etcd:2379
        - BRANCH_SERVER_ADDR=192.168.188.233:32079
    networks:
        - local_micro
networks:
    local_micro:

```

H3 本地排查 安装 docker-composer

```

6457 docker ps
6458 php artisan rpc:agent start
6459 docker restart some-etcd
6460 php artisan rpc:agent start
6461 docker ps
6462 docker restart some-api-proxy
6463 php artisan rpc:agent start
6464 brew install docker-compose
6465 ls
6466 cd code
6467 ls
6468 mkdir rpc
6469 cd rpc
6470 vim docker-compose.yml
6471 docker stop some-api-proxy
6472 docker stop some-etcd
6473 docker stop some-rabbit
6474 ls
6475 docker-compose up -d
6476 docker images
6477 docker rm --force 67324ca93784
6478 docker rmi --force 67324ca93784
6479 docker rmi --force f277f895bbaa

```

```
6480 docker rmi --force 2df96e44cef8
6481 docker rmi --force 7142e1197d11
6482 docker-compose up -d
6483 docker ls
6484 docker
6485 docker ls
6486 docker ls container
6487 docker container
6488 docker container ls
6489 docker ps
6490 docker rm
c5ac5e1b574547d92a63f9d2ec1b66429a2ebbb415d9f2276d2a0c8449da72cd
6491 docker rm
50bc27674fc993b36a2af25f66abb0ebf68a1a1565cf8dda8f2f343b6f3e8367
6492 docker rm
c5ac5e1b574547d92a63f9d2ec1b66429a2ebbb415d9f2276d2a0c8449da72cd
6493 docker-compose up -d
6494 docker rm
69523607c26f4f055faf915d26104ea4c4280f328e5dd031f2500725da72662a
6495 docker-compose up -d
6496 docker ps
6497 php artisan rpc:agent start
6498 docker logs -f some-api-proxy
6499 ps -ef | grep etcd
6500 brew uninstall etcd
6501 git pull
6502 composer install
```

H3 遇到的问题

H4 mac 系统，RPC 调用不成功

需要在项目根目录，加两个脚本

- micro-branch-proxy (用 go 写的一个脚本)
- config.yaml 配置文件

```
# 执行代理接口切换
chmod +x micro-branch-proxy
./micro-branch-proxy client

# 查看是否启动成功
cd /Users/dushige/Code/rpc
docker-compose ps
```

```
→ rpc docker-compose ps
```

Name	Command	State	Ports
some-api-proxy	/bin/run.sh	Up	0.0.0.0:3006->3006/tcp, 0.0.0.0:3080->3080/tcp, 80/tcp
some-branch-proxy	/bin/sh -c /bin/branch_pro ...	Up	
some-etcd	/bin/run.sh	Up	0.0.0.0:2379->2379/tcp, 0.0.0.0:2380->2380/tcp
some-rabbit	docker-entrypoint.sh rabbit ...	Up	15671/tcp, 0.0.0.0:8083->15672/tcp, 25672/tcp, 4369/tcp, 5671/tcp, 0.0.0.0:5672->5672/tcp

H4 换成 cache 报错

```
# 报错: this cache store does not support tagging. laravel 5.7
redis
CACHE_DRIVER=array
```

H3 备份 MySQL 数据库 批量导出

- centos 下mysqldump备份多个数据库命令

```
# 备份所有数据库结构
mysqldump -h192.168.188.231 -P33061 -uroot -p -A -
d>/Volumes/code/mainto/mainto20191126.sql

# 备份指定数据库
mydb t1 t2
mysqldump -h192.168.188.231 -uroot -p -A mydb t1
t2>/Volumes/code/mainto/mainto20200302.sql

# 备份全部数据库的数据和结构
mysqldump -h192.168.188.231 -uroot -p -A
>/Volumes/code/mainto/mainto20200302.sql
```