

框架名称: **featherRestfulPHP**

框架定位: 一款高效、轻量、专为 Restful 的 PHP 开源框架

更新日期: 2019/11/10

开源地址: <https://github.com/wisdomcraft/feather>

临时演示: <http://feather.patentinfos.com/>

框架特点:

- a) 轻量化, zip 压缩包仅有 12~16KB, 解压后 25~55KB;
- b) 与 MVC 框架不同, Restful API 框架没有模板引擎, 即 view;
- c) 支持 GET、POST、PUT、DELETE、PATCH、HEAD 操作;
- d) GET、POST 等操作, 对应的 class 类文件是分开的, 方便程序开发与维护;
- e) 理论上支持无限级目录, 只要 url 足够长, 例如:  
    /news/sport/football/match/2019game
- f) OAuth 认证机制, 使用 token 管理操作权限;

# url 模式

共计可提供四种 url 模式

原生 url:	/index.php?a[]=news&a[]=sport&a[]=football
PATHINFO:	/index.php/news/sport/football
API 模式:	/news/sport/football
Nginx rewrite:	可灵活定义任意 url, 例如: /news_sport_football

原生 url, nginx 与 php 的 fastcgi, nginx 配置示例, 如下:

```
[root@izj6c06j326zzsgm7s12f9z ~]# cat /usr/local/nginx/conf/vhosts/feather.patentinfos.com.conf
server {
    listen      80;
    server_name feather.patentinfos.com;
    location / {
        root    /srv/www/feather.patentinfos.com/public;
        index   index.php;
    }
    location ~ /\.php$ {
        root          /srv/www/feather.patentinfos.com/public;
        fastcgi_pass  127.0.0.1:9000;
        fastcgi_index index.php;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include       fastcgi_params;
    }
}
```

PATHINFO 与 API 模式, 其 nginx 的配置是一样的

首先, 将 php.ini 的 cgi.fix\_pathinfo=1 开启, 然后重启 fastcgi 服务, systemctl restart php-fpm  
nginx 的配置, 示例如下:

```
[root@izj6c06j326zzsgm7sl2f9z ~]# cat /usr/local/nginx/conf/vhosts/feather.patentinfos.com.conf
server {
    listen      80;
    server_name feather.patentinfos.com;
    index       index.php;
    root        /srv/www/feather.patentinfos.com/public;

    location / {
        if (!-e $request_filename){
            rewrite ^/(.*)$ /index.php/$1 last;
        }
    }

    location ~ [^/]\.php(/|$) {
        fastcgi_split_path_info ^(.+\.(php))(/.+)$;
        fastcgi_pass      127.0.0.1:9000;
        fastcgi_index      index.php;
        include             fastcgi.conf;
        fastcgi_param       PATH_INFO $fastcgi_path_info;
        fastcgi_param       SCRIPT_FILENAME $document_root$fastcgi_script_name;
    }
}
```

## 接口数据格式

接口数据的格式，使用 json 和 xml，可根据用户提供的 curl 灵活输出。

request header

```
Content-Type: application/json;
Accept-Type: application/json;
```

request header

```
Content-Type: application/xml;
Accept-Type: application/xml;
```

示例：

```
{"status": "success", "message": "...", "token": "c4ca4238a0b923820dcc509a6f75849b"}
```

<xml>

```
<status>success</status>
```

```
<message>...</message>
```

```
<token>c4ca4238a0b923820dcc509a6f75849b</token>
```

</xml>

# 数据库

feather\_token

token	varchar(255)	token 值
remote	varchar(20)	用户的 IP 地址
updatetime	int(11)	token 更新时间
valid	tinyint(1)	token 是否有效

```
feather.sql
1
2 create database if not exists `feather`;
3
4 use feather;
5
6 create table if not exists `feather_token` (
7     `token` varchar(255) not null,
8     `remote` varchar(20) not null,
9     `updatetime` int(11) not null default 0,
10    `valid` tinyint(1) not null default 0,
11    primary key token(`token`),
12    index remote(`remote`),
13    index updatetime(`updatetime`),
14    index valid(`valid`)
15 )engine=MyISAM charset=utf8;
16
17 -----
18 -- about user, for example
19 -----
20 create user 'feather_user'@'172.31.169.91' identified by 'Nns<:%6-';
21 grant select on feather.* to 'feather_user'@'172.31.169.91';
22 grant insert on feather.* to 'feather_user'@'172.31.169.91';
23 grant update on feather.* to 'feather_user'@'172.31.169.91';
24 grant delete on feather.* to 'feather_user'@'172.31.169.91';
```

# 架构

public

|-- index.php                    入口文件

application

|-- config                    配置文件目录

|-- action                    行为文件目录

    |-- hello.get.php            /index.php/hello 的 GET 操作，默认是 index 函数

    |-- hello.post.php           /index.php/hello 的 POST 操作

    |-- hello.put.php            /index.php/hello 的 PUT 操作

-- hello.delete.php	/index.php/hello 的 DELETE 操作
-- model	模型目录，存放数据库的具体操作，以及复杂的运算
-- index.model.php	/index.php/index 操作的模型
feather	
-- featherRestfulPHP.php	框架引入文件
-- common	公共文件，如：函数库、配置文件
-- route	路由
-- token	token 相关
feather.sql	数据库 sql 导入

## 示例

获取 token

POST /token/fetch

检测 token 是否有效，并且延长 token 的过期时间

POST /token/check

获取 token

```
curl -i -X POST \
--header 'Content-Type: application/json' \
--header 'Accept: application/json' \
-d '{"username":"admin","password":"123456"}' \
http://feather.patentinfos.com/index.php/token/fetch
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X POST \
> --header 'Content-Type: application/json' \
> --header 'Accept: application/json' \
> -d '{"username":"admin","password":"123456"}' \
> http://feather.patentinfos.com/index.php/token/fetch
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Sun, 10 Nov 2019 16:36:36 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

{"status":"success","message":"fetch token successfully","token":"585eb4609041803d7852bba7d2a60767012519a3d7ac566fe7122141fd09cdd5"}
[root@izj6c06j326zzsgm7s12f9z ~]#
```

```
curl -i -X POST \
--header 'Content-Type: application/json' \
--header 'Accept: application/xml' \
-d '{"username":"admin","password":"123456"}' \
http://feather.patentinfos.com/index.php/token/fetch
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X POST \
> --header 'Content-Type: application/json' \
> --header 'Accept: application/xml' \
> -d '{"username":"admin","password":"123456"}' \
> http://feather.patentinfos.com/index.php/token/fetch
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Sun, 10 Nov 2019 16:38:23 GMT
Content-Type: application/xml
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

<xml>
  <status>success</status>
  <message>fetch token successfully</message>
  <token>4e6c5b385020d7ad2f5e54dfd796e0f90580548f41a67d52875fbb610a4cbbc</token>
</xml>[root@izj6c06j326zzsgm7s12f9z ~]#
[root@izj6c06j326zzsgm7s12f9z ~]#
```

检查 token 是否有效，以及延长其过期时间  
 在使用 token 之前，对其进行检查与更新，是一个很好的习惯。

```
curl -i -X POST \
--header 'Accept: application/json' \
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
http://feather.patentinfos.com/index.php/token/check
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X POST \
> --header 'Accept: application/json' \
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
> http://feather.patentinfos.com/index.php/token/check
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Mon, 11 Nov 2019 02:49:42 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

{"status":"success","message":"token is valid and updated"}[root@izj6c06j326zzsgm7s12f9z ~]#
[root@izj6c06j326zzsgm7s12f9z ~]#
```

执行某个 GET 操作

```
curl -i -X GET \
--header 'Accept: application/json' \
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
http://feather.patentinfos.com/index.php/news
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X GET \
> --header 'Accept: application/json' \
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
> http://feather.patentinfos.com/index.php/news
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Mon, 11 Nov 2019 03:20:06 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

{"status": "success", "message": "GET, news!"}[root@izj6c06j326zzsgm7s12f9z ~]#
```

返回 xml

```
curl -i -X GET \
--header 'Accept: application/xml' \
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
http://feather.patentinfos.com/index.php/news
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X GET \
> --header 'Accept: application/xml' \
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
> http://feather.patentinfos.com/index.php/news
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Mon, 11 Nov 2019 03:21:24 GMT
Content-Type: application/xml
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

<xml>
  <status>success</status>
  <message>GET, news!</message>
</xml>[root@izj6c06j326zzsgm7s12f9z ~]#
[root@izj6c06j326zzsgm7s12f9z ~]#
```

如果 token 错误，返回 401 Unauthorized

```
curl -i -X GET \
--header 'Accept: application/json' \
--header 'Authorization: Bearer xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx' \
http://feather.patentinfos.com/index.php/news
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X GET \
> --header 'Accept: application/json' \
> --header 'Authorization: Bearer xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx' \
> http://feather.patentinfos.com/index.php/news
HTTP/1.1 401 Unauthorized
Server: nginx/1.14.0
Date: Mon, 11 Nov 2019 03:22:49 GMT
Content-Type: application/json
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

{"status": "error", "message": "token is invalid"}[root@izj6c06j326zzsgm7s12f9z ~]#
[root@izj6c06j326zzsgm7s12f9z ~]#
```

执行 POST 操作，示例

```
curl -i -X POST \
```



```
--header 'Accept: application/xml' \  
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \  
http://feather.patentinfos.com/index.php/hello
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X POST \  
> --header 'Accept: application/xml' \  
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \  
> http://feather.patentinfos.com/index.php/hello  
HTTP/1.1 200 OK  
Server: nginx/1.14.0  
Date: Mon, 11 Nov 2019 03:29:06 GMT  
Content-Type: application/xml  
Transfer-Encoding: chunked  
Connection: close  
X-Powered-By: PHP/7.3.3  
  
<xml>  
  <status>success</status>  
  <message>POST, hello, world!</message>  
</xml>[root@izj6c06j326zzsgm7s12f9z ~]#  
[root@izj6c06j326zzsgm7s12f9z ~]#
```

执行 PUT 操作，示例

```
curl -i -X PUT \  
--header 'Accept: application/xml' \  
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \  
http://feather.patentinfos.com/index.php/hello
```

```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X PUT \  
> --header 'Accept: application/xml' \  
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \  
> http://feather.patentinfos.com/index.php/hello  
HTTP/1.1 200 OK  
Server: nginx/1.14.0  
Date: Mon, 11 Nov 2019 03:29:48 GMT  
Content-Type: application/xml  
Transfer-Encoding: chunked  
Connection: close  
X-Powered-By: PHP/7.3.3  
  
<xml>  
  <status>success</status>  
  <message>PUT, hello, world!</message>  
</xml>[root@izj6c06j326zzsgm7s12f9z ~]#  
[root@izj6c06j326zzsgm7s12f9z ~]#
```

执行 DELETE 操作，示例

```
curl -i -X DELETE \  
--header 'Accept: application/xml' \  
--header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \  
http://feather.patentinfos.com/index.php/hello
```



```
[root@izj6c06j326zzsgm7s12f9z ~]# curl -i -X DELETE \
> --header 'Accept: application/xml' \
> --header 'Authorization: Bearer 8d5db81dfe6bffbace3808f72f61070a2b12341c1aa7cf99f804f0f24937df19' \
> http://feather.patentinfos.com/index.php/hello
HTTP/1.1 200 OK
Server: nginx/1.14.0
Date: Mon, 11 Nov 2019 03:30:07 GMT
Content-Type: application/xml
Transfer-Encoding: chunked
Connection: close
X-Powered-By: PHP/7.3.3

<xml>
  <status>success</status>
  <message>DELETE, hello, world!</message>
</xml>[root@izj6c06j326zzsgm7s12f9z ~]#
[root@izj6c06j326zzsgm7s12f9z ~]#
```