

支付宝前端工具 spm

放心好用的包管理工具

为什么用引入前端工具？

- 代码合并
- 代码压缩
- 代码检查
- 代码部署
-

支付宝前端工具历史

- Ant
- maven

spm 出现背景

- V8
- Nodejs
- Npm
- CMD
- SeaJs

spm 竞争对手

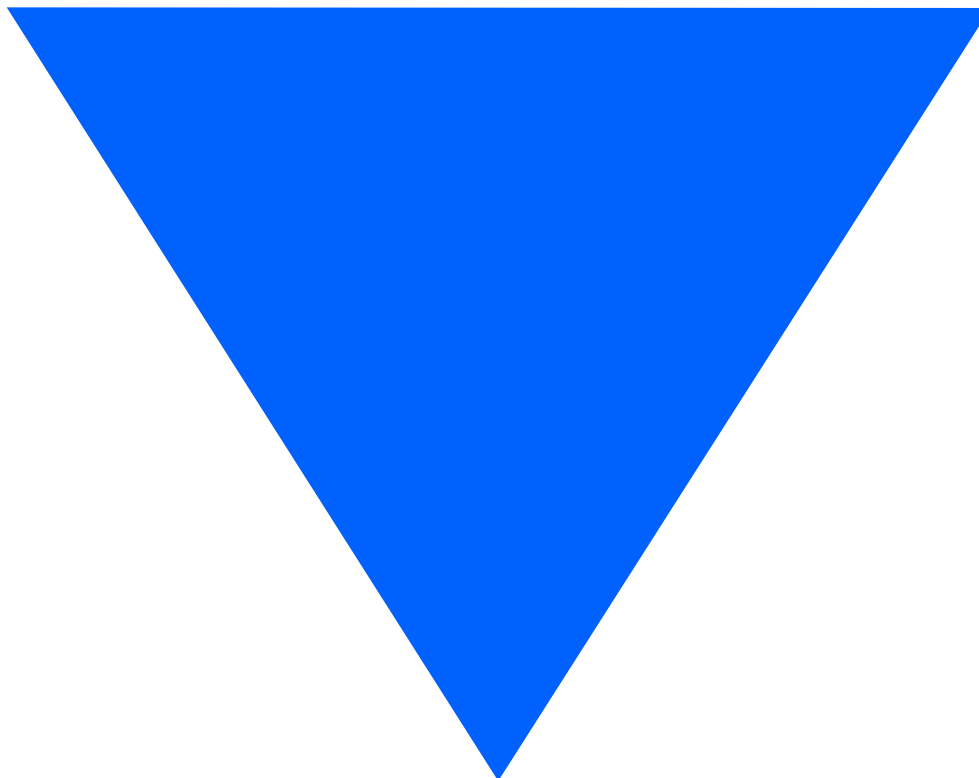
- Grunt
- Ender
- Bower
- Yeoman
-

Spm 核心思想

易用

性能

可扩展



Spm 主要特点

- 基于nodejs
- 前端友好
- 依赖分析
- 版本管理
- 构建迅速
- 可扩展
- 支持多种项目构建

spm

Static Package Manager

简单放心的包管理工具

spm 安装

通过 npm 安装

```
$ npm install spm -g
```

通过克隆 Git 上的源码安装

```
$ git clone https://github.com/seajs/spm.git  
$ cd spm  
$ npm install -g
```

运行

```
spm -v
```

输出正确的版本，就表明安装没有问题了。

spm api

```
spm help [options]

spm init [options]
spm install [options] name[@version]

spm build [options]
spm upload [options]
spm deploy [options]

spm sources [options]
spm server [options]

spm info [options]
spm transport [--force] transport.js

spm min [options]
spm concat [options]
spm lint [options]

...
```

总结

- spm 核心思想
- spm 安装
- spm api 介绍

spm action

- Build
- upload
- Publish
- deploy
- Install
- search
- server

spm plugin

编译类

- * coffee
- * less
- * transport

功能

- * output
- * min
- * zip

小结

- Action
- plugin

spm 配置文件

- 模块配置
- **parent** 配置
- 用户配置
- 源配置

模块配置

```
{  
  "name": "base",  
  "root": "arale",  
  "description": "Base 是一个基础类, 提供 Class、Events、Attribute 和 Aspect 支持。",  
  "version": "1.0.1",  
  "tag": "infrastructure",  
  "homepage": "http://aralejs.org/base",  
  "repository": {  
    "type": "git",  
    "url": "https://github.com/aralejs/base.git"  
  },  
  "bugs": {  
    "url": "https://github.com/aralejs/base/issues"  
  },  
  "dependencies": {  
    "class": "arale/class/1.0.0/class",  
    "events": "arale/events/1.0.0/events"  
  },  
  "tests": ["base"],  
  "output": {  
    "base.js": "."  
  }  
}
```


源配置

```
{
  "roots": ["arale", "spm", "template"],
  "servers": {
    "dev": {
      "user": "dev",
      "pass": "dev123"
    }
  },
  "deploy": {
    "#": "arale",
    "server": "dev",
    "host": "assets.dev.alipay.net",
    "path": "/home/dev/static/dev/"
  },
  "spmConfig": {
    "*": {
      "baseUrl": "https://a.alipayobjects.com/static",
      "plugins": {
        "build": {
          "after": "spm/online-status/1.0.0/check"
        }
      }
    }
  }
}
```

重点配置项

- dependencies
- output
- spmConfig

output

```
"output": {
  "new_module.js": {
    "main": "./allMerge.js",
    "includes": ["./a.js", "./b.js", ".", "./c.js"]
  },
  "new_module2.js": {
    "main": "./allMerge.js",
    "includes": ["js/*.js", "*"]
  },
  "localMerge.js": ".",
  "allMerge.js": "*",
  "arrayMerge.js": ["./arrayMerge.js", "./a.js", "./b.js", "./c.js"],
  "excludeMergeA.js": {
    "includes": ".",
    "excludes": ["./a.js"]
  },
  "excludeMergeB.js": {
    "includes": "*",
    "excludes": ["arale/widget/1.0.2/widget"]
  },
}
```

dependencies

```
"dependencies": {  
  "$": "$",  
  "widget": "arale/widget/1.0.2/widget",  
  "easing": "arale/easing/1.0.0/easing"  
},
```

dependencies

```
"dependencies": {  
  "$": "$",  
  "handlebars": "gallery/handlebars/1.0.0/handlebars",  
  "base": "arale/base/1.0.1/base"  
},
```

output

```
"output": {  
  "widget.js": ".",  
  "templatetable.js": ".",  
},
```

<https://github.com/spmjs/spm/wiki/package.json--output>

spmConfig

```
"spmConfig": {  
  "*": {  
    "baseUrl": "https://a.alipayobjects.com",  
    "plugins": {  
      "build": {  
        "after": "spm/online-status/1.0.0/check"  
      },  
      "deploy": {  
        "before": "spm/alipay-deploy/1.0.0/deploy"  
      }  
    }  
  }  
}
```

配置加载顺序

- 模块配置(module/package.json)
- parent (如果用户配置 parent)
- 用户配置 (~/.spm/config.json)
- 源配置(如果有多个会依次加载)

配置覆盖策略

- 最先加载的优先级最高, 相同 **key** 值不会被覆盖
- 如果 **value** 是对象会进行递归合并
- 数组合并, 会把后面的内容, 依次添加到数组中。

总结

- 配置文件的种类
- 配置文件主要配置属性

什么是源

- 仓库
- 协同开发
- 模块管理

搭建私有源

- `spm server -p 7000`

```
"sources": ["http://modules.spmjs.org"],
```

spm 核心功能

- spm build
- spm upload
- spm deploy

spm 辅助功能

- spm init
- spm install
- spm search
- spm lint
- spm min
- spm seajs --config

spm transport

```
define(function(require) {  
    // @include http://code.jquery.com/jquery-{{version}}.js  
    return $.noConflict(true);  
});
```

```
"output": {  
    "jquery.js": "."  
}
```

Spm 扩展

- Plugin
- Node api

spm plugin

```
var path = require('path');  
var request = require('request');  
  
var plugin = module.exports = Plugin.create('hello');  
  
plugin.run = function(project, callback) {  
  console.info('hello');  
  callback();  
};
```

插件挂载

```
"spmConfig": {  
  "*": {  
    "baseUrl": "https://a.alipayobjects.com/static",  
    "plugins": {  
      "build": {  
        "after": "spm/online-status/1.0.0/check"  
      }  
    }  
  }  
}
```

开发者 API

```
var spm = require('spm');  
var install = spm.getAction('install');  
  
install.run({modules: ['gallery.jquery', 'arale.widget'],  
force: true, to: moduleDir}, function() {  
    console.info('hello install');  
});
```

spm 实战

- Hello-spm

<https://github.com/fool2fish/hello-spm>