

# puppet 资源 package 详细介绍（附案例）

## 一、资源介绍

### Description

Manage packages. There is a basic dichotomy in package support right now: Some package types (e.g., yum and apt) can retrieve their own package files, while others (e.g., rpm and sun) cannot. For those package formats that cannot retrieve their own files, you can use the source parameter to point to the correct file.

Puppet will automatically guess the packaging format that you are using based on the platform you are on, but you can override it using the provider parameter; each provider defines what it requires in order to function, and you must meet those requirements to use a given provider.

Autorequires: If Puppet is managing the files specified as a package's adminfile, responsefile, or source, the package resource will autorequire those files.

### Attributes

```
package { 'resource title':
  name          => # (namevar) The package name. This is the name that the...
  ensure        => # What state the package should be in. On...
  adminfile     => # A file containing package defaults for...
  allowcdrom    => # Tells apt to allow cdrom sources in the...
  category      => # A read-only parameter set by the...
  configfiles   => # Whether configfiles should be kept or replaced.
  description   => # A read-only parameter set by the...
  flavor        => # OpenBSD supports 'flavors', which are further...
  install_options => # An array of additional options to pass when...
  instance      => # A read-only parameter set by the...
  platform      => # A read-only parameter set by the...
  provider      => # The specific backend to use for this `package...
  responsefile  => # A file containing any necessary answers to...
  root          => # A read-only parameter set by the...
  source        => # Where to find the actual package. This must be...
  status        => # A read-only parameter set by the...
  uninstall_options => # An array of additional options to pass when...
  vendor        => # A read-only parameter set by the...
  # ...plus any applicable metaparameters.
}
```

## 1、实现功能

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- 1.1 管理那些软件包被安装，那些软件包被卸载
- 1.2 管理软件包是否更新
- 1.3 要求系统配置 yum 源（RedHat 系统）、zypper 源（Suse 系统）等等
- 1.4 有关不同操作系统支持类型请查阅

<http://docs.puppetlabs.com/references/stable/type.html>

## 二、系统环境

### 1、puppet 服务端

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```
Release: RHEL6.4
HOSTNAME: puppetserver.kisspuppet.com
TCP/IP: 172.16.200.100/24
Packages:
puppet-server-2.7.21-1.el6.noarch
mcollective-client-2.2.4
activemq-5.5.0
```

### 2、puppet 节点

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```
Release: RHEL5.8
HOSTNAME: agent1.kisspuppet.com
TCP/IP: 172.16.200.101/24
Packages:
puppet-2.7.21-1.el5
mcollective-2.2.4-1.el5
```

### 3、puppet 节点

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```
Release: RHEL6.4
HOSTNAME: agent3.kisspuppet.com
TCP/IP: 172.16.200.103/24
Packages:
puppet-2.7.21-1.el6
mcollective-2.2.4-1.el6
```

## 三、支持参数

2.1 ensure => {present|installed|absent|latest|purged|"version"}, 指定文件的目标状态  
=> present|installed, 检查文件是否存在, 不存在则新建之  
=> absent, 无其他软件依赖, 可删除, 否则会报错。  
=> latest, 检查文件是否为最新版本, 否则升级为最新版本  
=> purged, 删除该包包括所有依赖的包, 有风险慎用  
=> "2.7.21-1", 指定某一个版本处于安装状态

2.2 name => package name, 包的名字, 默认与 title 相同可不写

2.3 provider => rpm, 要求通过 rpm 命令安装包, 需要通过 source 指定安装那些包

## 四、资源示例

### 1、示例一

#### 1.1 实现功能

\*判断系统为 RedHat 的情况下安装 mysql-server 和 mysql, 系统为 SLES 的情况下安装 mysql 和 mysql-client, 其他系统安装 mysql-server 和 mysql 包  
\*要求安装的包一直处于安装状态

#### 1.2 配置说明

```
class mysql::install{
  package { "mysql":
    name    => $operatingsystem ?
    {
      RedHat => ["mysql-server","mysql"],
      SLES   => ["mysql","mysql-client"],
      default => ["mysql-server","mysql"],
    },
    ensure => installed,
  }
}
```

### 1.3 客户端 agent1 测试

```
[root@agent1 ~]# puppet agent --test
info: Retrieving plugin
info: Loading facts in /var/lib/puppet/lib/facter/my_apply2.rb
info: Loading facts in /var/lib/puppet/lib/facter/my_apply1.rb
info: Loading facts in /var/lib/puppet/lib/facter/my_apply3.rb
info: Loading facts in /var/lib/puppet/lib/facter/backup_date.rb
info: Caching catalog for agent1.kisspuppet.com
info: Applying configuration version '1378200479'
notice: /Stage[main]/Mysql::Install/Package[mysql]/ensure: created
notice: /Stage[main]/Mysql::Service/Service[mysqld]/ensure: ensure changed
'stopped' to 'running'
notice: Finished catalog run in 9.68 seconds
```

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## 2、示例二

### 2.1 实现功能

\*要求安装的 autofs 包版本为 5.0.1-0.rc2.163.el5

### 2.2 配置说明

```
class autofs::install{
  package { "autofs":
    ensure => "5.0.1-0.rc2.163.el5",
  }
}
```

### 2.3 客户端 agent2 测试

```
[root@agent1 ~]# puppet agent --test
info: Caching catalog for agent1.kisspuppet.com
info: Applying configuration version '1378201631'
notice: /Stage[main]/Autofs::Install/Package[autofs]/ensure: created
```

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## 3、示例三

### 3.1 实现功能

\*要求安装的 postfix 包版本更新至最新版本

### 3.2 配置说明

```
class postfix::install{
  package { "postfix":
    ensure => latest,
  }
}
```

### 2.3 客户端 agent2 测试

```
[root@agent1 rhel5]# rpm -qa postfix
postfix-2.3.3-2.3.el5_6
[root@agent1 rhel5]# puppet agent --test
info: Caching catalog for agent1.kisspuppet.com
info: Applying configuration version '1378202947'
notice: /Stage[main]/Postfix::Install/Package[postfix]/ensure: ensure changed
'2.3.3-2.3.el5_6' to '2:2.5.17-1.rhel5'
notice: Finished catalog run in 6.42 seconds
[root@agent1 rhel5]# rpm -qa postfix
postfix-2.5.17-1.rhel5
[root@agent1 rhel5]#
```

## 4、示例四

### 4.1 实现功能

\*要求 postfix 包不允许被安装

### 4.2 配置说明

```
class postfix::install{
  package { "postfix":
    ensure => absent,
  }
}
```

#### 4.3 客户端 agent2 测试

```
[root@agent1 rhel5]# rpm -qa postfix
postfix-2.5.17-1.rhel5
[root@agent1 rhel5]# puppet agent --test
info: Caching catalog for agent1.kisspuppet.com
info: Applying configuration version '1378203359'
notice: /Stage[main]/Postfix::Install/Package[postfix]/ensure: removed
notice: Finished catalog run in 1.00 seconds
[root@agent1 rhel5]# rpm -qa postfix
```

## 5、示例五

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#### 5.1 实现功能

\*要求通过 rpm 命令安装本地 rpm 包/tmp/rhel5/postfix-2.5.17-1.rhel5.x86\_64.rpm

#### 5.2 配置说明

```
class postfix::install{
  package { "postfix":
    ensure    => present,
    provider => rpm,
    source    => "/tmp/rhel5/postfix-2.5.17-1.rhel5.x86_64.rpm",
  }
}
```

#### 5.3 客户端 agent1 测试

```
[root@agent1 rhel5]# rpm -qa postfix
[root@agent1 rhel5]# puppet agent --test --verbose
info: Caching catalog for agent1.kisspuppet.com
info: Applying configuration version '1378204203'
notice: /Stage[main]/Postfix::Install/Package[postfix]/ensure: created
notice: Finished catalog run in 3.43 seconds
[root@agent1 rhel5]# rpm -qa postfix
postfix-2.5.17-1.rhel5
```

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为了能够和大家更好的交流和学习 Puppet，本人 2014 年又新开辟了微信公众号进行交流学习，目前已经有 300 多人同时收听，喜欢 Puppet 的大神们可自行加入哦。

如果你有好的有关 Puppet 的咨询也可以给我投稿，投稿邮箱：  
[admin@kisspuppet.com](mailto:admin@kisspuppet.com)

微信公众号：“**puppet2014**”，可搜索加入，也可以扫描以下二维码

