

开始学习如何使用 Zabbix，从最基础的安装做起。CentOS 上默认的 Zabbix 是默认 Apache 的，且版本较低，我比较追求新版本，明明白白安装软件的感觉，遂自行编译更加合适。

## 准备工作

- yum 安装的 mysql ( mariadb-server ), 这个不多说。
- 编译安装的 php7.0.10 和 nginx1.10

**Q:** 如何编译安装 **php7** 呢？

**A:** 难点在于编译选项和依赖关系，整理步骤如下：

1. 下载[源码包](#)到 /usr/local/src 目录下, 解压后进入安装目录。( sha256sum: 348476ff7ba8d95a1e28e1059430c10470c5f8110f6d9133d30153dda4cdf56a )
2. 使用 yum 安装 epel-release
3. 编译安装我写了一个脚本如下 ( php-fpm ):

```
#!/bin/bash
#
# created by Bekcpear
# 2016-08-21 CST(China Standard Time)
#
# This script is created to configuring and install php-7.0.10 from source code.
# When installation finished, the php installed will meet the requirments of the Laravel framework 5.2.
# It's my first shell script, being served for my Blog with nginx.

# update 160822 add support function for Zabbix 3.0.4

# !Make sure you have installed mariadb-server

# If you installed mariadb/mysql server from source code, please uncomment the line below and modify to correct path to mysql/
mariadb. This is wrong. Ignore it.
# CUS_MYSQLPATH = /usr/local/mysql
```

```
CONF="--prefix=/usr/local/php/ \  
--enable-fpm \  
--with-config-file-path=/usr/local/php/etc \  
--with-fpm-user=php-fpm \  
--with-fpm-group=php-fpm \  
--with-mysql-sock=/var/run/mysql.sock \  
--with-mysqli \  
--with-libxml-dir \  
--with-gd \  
--with-jpeg-dir \  
--with-png-dir \  
--with-freetype-dir \  
--with-iconv-dir \  
--with-zlib-dir \  
--with-mcrypt \  
--with-curl \  
--with-pear \  
--with-gettext \  
--enable-bcmath \  
--enable-sockets \  
--enable-soap \  
--enable-gd-native-ttf \  
--enable-ftp \  
--enable-exif \  
--enable-tokenizer \  
--with-pdo-mysql \  
--enable-mbstring \  
--with-openssl"  
CONF_0=" --with-pdo-mysql"  
CONF_1=" --with-pdo-mysql="$CUS_MYSQLPATH  
# last 4 parameters are needed by Laravel  
  
if [ -z $CUS_MYSQLPATH ]; then  
    CONF=$CONF$CONF_0;  
else  
    CONF=$CONF$CONF_1;
```

fi

```
# Please install epel-release first.
```

```
PREBUILD="\
gcc \
libxml2 \
libxml2-devel \
openssl \
openssl-devel \
bzip2 \
bzip2-devel \
libjpeg \
libjpeg-devel \
libpng \
libpng-devel \
gettext \
gettext-devel \
freetype \
freetype-devel \
libmcrypt \
libmcrypt-devel \
libcurl \
libcurl-devel"
```

```
yum install -y $PREBUILD;
```

```
if [ $? -eq 0 ];then
    ./configure $CONF && make && make install
fi
```

**Q:** 如何配置 **php** 并使之适合 **zabbix3.0.4** ?

**A:** 配置项目其实很少，如下：

1. 复制启动文件 `/usr/local/src/php-7.0.10/sapi/fpm/php-fpm.service` 到 `/lib/systemd/system/php-fpm.service`, 并修改里面的路径到程序主目录
2. 新建用户 `php-fpm` 和组 `php-fpm`
3. 两个示例文件 `/usr/local/php/etc/php-fpm.conf.example` 和 `/usr/local/php/etc/php-fpm.d/www.conf.example`, 去掉 `example` 字样
4. 一些基本的修改不赘述了, 应 `zabbix` 要求, 需要在 `/usr/local/php/etc/php-fpm.d/www.conf` 结尾加入如下内容, 之后就可以运行了:

```
php_value[max_execution_time] = 300
php_value[post_max_size] = 16M
php_value[date.timezone] = "Asia/Shanghai"
```

**Q: 如何编译安装 `nginx1.10stable` ?**

A: 这个相对来说就很简单了, 如下:

1. 下载[源码包](#)并解压。关于校验, 官网有[pgp 文件](#), 公钥用[这个](#)。
2. 进入源码目录下编译, 可能需要解决写依赖关系:

```
CUS_CONF="\
--prefix=/usr/local/nginx/ \
--with-http_realip_module \
--with-http_sub_module \
--with-http_gzip_static_module \
--with-http_stub_status_module \
--with-http_ssl_module \
--with-pcre"

./configure $CUS_CONF && make && make install
```

**Q: 如何配置启动 `nginx` ?**

A: 依旧是 `nginx` 配置文件 + `systemd` 启动服务文件。

1. 启动服务文件可以从[nginx.com](#)上复制:
2. 配置文件在 `/usr/local/nginx/conf/nginx.conf`, 安装需求修改, 比如针对 `Zabbix` 的一段内容, 之后就可以启动 `nginx` 了:

```
server {
    listen 8080;

    access_log /usr/local/nginx/logs/1.access.log main;
    error_log /usr/local/nginx/logs/1.error.log;
    root /home/html/1;

    location / {
        index index.php index.html;
    }

    #error_page 404 /404.html;

    # redirect server error pages to the static page /50x.html
    #
    error_page 500 502 503 504 /50x.html;
    location = /50x.html {
        root /usr/local/nginx/html;
    }

    # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
    #
    location ~ \.php$ {
        fastcgi_pass 127.0.0.1:9000;
        fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
        include fastcgi_params;
    }
}
```

准备工作结束了，如何编译安装 **Zabbix** 呢？

其实可以参考[官方网站](#)的内容，也很简单。

整理了一下如下：

1. 下载[源码包](#)，解压并进入。这个我没有找到校验文件...

2. 创建用户，一般就创建一个组为 **zabbix** 的 **zabbix** 用户即可，注意的是，当 **Zabbix** 的 **server** 和 **agent** 同时运行在一台主机上时，推荐是将 **server** 的运行用户独立于 **agent** 的运行用户的，不然 **agent** 可以访问 **server** 的配置文件，甚至数据库。

3. 创建数据库，这个在源码包里面有现成的脚本，一般这样子使用（针对我的 **Mysql** 数据库）：

```
shell> mysql -uroot -p<password>
mysql> create database zabbix character set utf8 collate utf8_bin;
mysql> grant all privileges on zabbix.* to zabbix@localhost identified by '<password>';
mysql> quit;
shell> cd database/mysql
shell> mysql -uzabbix -p<password> zabbix < schema.sql
# 如果仅仅是运行一个agent代理的话，下面的数据库文件不需要导入
shell> mysql -uzabbix -p<password> zabbix < images.sql
shell> mysql -uzabbix -p<password> zabbix < data.sql
```

4. 配置编译安装。配置选项 **--prefix=/usr/local/zabbix --enable-server --enable-agent --with-mysql --enable-ipv6 --with-net-snmp --with-libcurl --with-libxml2**，这将安装上 **server** 和 **agent** 两个功能

5. 编辑 **Zabbix** 目录 **etc** 目录下的配置文件，因为我是在一台机器上同时运行服务器和代理的，所以两个配置文件都需要配置。这边贴出来的删除了大量没有配置的选项及其注释，但是对于已经配置的选项的注释并没有删除。

```
##/usr/local/zabbix/etc/zabbix_agentd.conf
# This is a configuration file for Zabbix agent daemon (Unix)
# To get more information about Zabbix, visit http://www.zabbix.com
```

```
##### GENERAL PARAMETERS #####
```

```
### Option: PidFile
#   Name of PID file.
#
# Mandatory: no
# Default:
```

```
PidFile=/tmp/zabbix_agentd.pid
```

```
### Option: LogFile
```

```
# Log file name for LogType 'file' parameter.
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
# LogFile=
```

```
LogFile=/var/log/zabbix/zabbix_agentd.log
```

```
### Option: LogFileSize
```

```
# Maximum size of log file in MB.
```

```
# 0 - disable automatic log rotation.
```

```
#
```

```
# Mandatory: no
```

```
# Range: 0-1024
```

```
# Default:
```

```
LogFileSize=5
```

```
### Option: Server
```

```
# List of comma delimited IP addresses (or hostnames) of Zabbix servers.
```

```
# Incoming connections will be accepted only from the hosts listed here.
```

```
# If IPv6 support is enabled then '127.0.0.1', '::127.0.0.1', '::ffff:127.0.0.1' are treated equally.
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
# Server=
```

```
Server=127.0.0.1
```

```
### Option: ListenPort
```

```
# Agent will listen on this port for connections from the server.
```

```
#
```

```
# Mandatory: no
```

```
# Range: 1024-32767
```

# Default:

ListenPort=10050

### Option: ListenIP

# List of comma delimited IP addresses that the agent should listen on.

# First IP address is sent to Zabbix server if connecting to it to retrieve list of active checks.

#

# Mandatory: no

# Default:

ListenIP=127.0.0.1

### Option: ServerActive

# List of comma delimited IP:port (or hostname:port) pairs of Zabbix servers for active checks.

# If port is not specified, default port is used.

# IPv6 addresses must be enclosed in square brackets if port for that host is specified.

# If port is not specified, square brackets for IPv6 addresses are optional.

# If this parameter is not specified, active checks are disabled.

# Example: ServerActive=127.0.0.1:20051,zabbix.domain,[::1]:30051,::1,[12fc::1]

#

# Mandatory: no

# Default:

# ServerActive=

ServerActive=127.0.0.1:10051

### Option: Hostname

# Unique, case sensitive hostname.

# Required for active checks and must match hostname as configured on the server.

# Value is acquired from HostnameItem if undefined.

#

# Mandatory: no

# Default:

# Hostname=

Hostname=your hostname



## ### Option: AllowRoot

```
# Allow the agent to run as 'root'. If disabled and the agent is started by 'root', the agent
# will try to switch to the user specified by the User configuration option instead.
# Has no effect if started under a regular user.
# 0 - do not allow
# 1 - allow
#
# Mandatory: no
# Default:
# AllowRoot=0
```

## ### Option: User

```
# Drop privileges to a specific, existing user on the system.
# Only has effect if run as 'root' and AllowRoot is disabled.
#
# Mandatory: no
# Default:
User=zabbix-agent
```

```
##/usr/local/zabbix/etc/zabbix_server.conf
```

```
# This is a configuration file for Zabbix server daemon
# To get more information about Zabbix, visit http://www.zabbix.com
```

## ##### GENERAL PARAMETERS #####

## ### Option: ListenPort

```
# Listen port for trapper.
#
# Mandatory: no
# Range: 1024-32767
# Default:
ListenPort=10051
```

## ### Option: LogFile

```
# Log file name for LogType 'file' parameter.
#
```

```
# Mandatory: no
# Default:
# LogFile=
```

```
LogFile=/var/log/zabbix/zabbix_server.log
```

```
### Option: LogFileSize
```

```
# Maximum size of log file in MB.
# 0 - disable automatic log rotation.
#
```

```
# Mandatory: no
# Range: 0-1024
# Default:
LogFileSize=5
```

```
### Option: PidFile
```

```
# Name of PID file.
#
# Mandatory: no
```

```
# Default:
PidFile=/tmp/zabbix_server.pid
```

```
### Option: DBName
```

```
# Database name.
# For SQLite3 path to database file must be provided. DBUser and DBPassword are ignored.
#
```

```
# Mandatory: yes
# Default:
# DBName=
```

```
DBName=zabbix
```

```
### Option: DBUser
```

```
# Database user. Ignored for SQLite.
#
# Mandatory: no
```

```
# Default:
```

```
# DBUser=
```

```
DBUser=zabbix
```

```
### Option: DBPassword
```

```
# Database password. Ignored for SQLite.
```

```
# Comment this line if no password is used.
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
DBPassword=passwd
```

```
### Option: DBSocket
```

```
# Path to MySQL socket.
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
DBSocket=/var/lib/mysql/mysql.sock
```

```
### Option: DBPort
```

```
# Database port when not using local socket. Ignored for SQLite.
```

```
#
```

```
# Mandatory: no
```

```
# Range: 1024-65535
```

```
# Default (for MySQL):
```

```
DBPort=3306
```

```
##### ADVANCED PARAMETERS #####
```

```
### Option: ListenIP
```

```
# List of comma delimited IP addresses that the trapper should listen on.
```

```
# Trapper will listen on all network interfaces if this parameter is missing.
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
# ListenIP=0.0.0.0
```

```
ListenIP=127.0.0.1
```

```
### Option: Timeout
```

```
# Specifies how long we wait for agent, SNMP device or external check (in seconds).
```

```
#
```

```
# Mandatory: no
```

```
# Range: 1-30
```

```
# Default:
```

```
# Timeout=3
```

```
Timeout=4
```

```
### Option: LogSlowQueries
```

```
# How long a database query may take before being logged (in milliseconds).
```

```
# Only works if DebugLevel set to 3, 4 or 5.
```

```
# 0 - don't log slow queries.
```

```
#
```

```
# Mandatory: no
```

```
# Range: 1-3600000
```

```
# Default:
```

```
# LogSlowQueries=0
```

```
LogSlowQueries=3000
```

```
### Option: AllowRoot
```

```
# Allow the server to run as 'root'. If disabled and the server is started by 'root', the server
```

```
# will try to switch to the user specified by the User configuration option instead.
```

```
# Has no effect if started under a regular user.
```

```
# 0 - do not allow
```

```
# 1 - allow
```

```
#
```

```
# Mandatory: no
```

```
# Default:
```

```
# AllowRoot=0
```

```
### Option: User
#   Drop privileges to a specific, existing user on the system.
#   Only has effect if run as 'root' and AllowRoot is disabled.
#
# Mandatory: no
# Default:
User=zabbix
```

## 6. 启动 **zabbix server** 和 **zabbix agentd**

```
# zabbix_server
# zabbix_agentd
```

## 7. 接下来就是安装 **Zabbix** 的 **Web** 接口了

这个非常简单，把源码目录下的 frontends/php 这个目录整个拷贝到 nginx 配置的根目录下，然后网页访问后，根据提示配置即可。注意防火墙权限，注意复制过去后，将目录权限开放给 PHP 的用户，我这里是 php-fpm 这个用户。不然可能无法配置成功。

配置安装时候遇到的几个问题。

- ``configure: error: MySQL library not found"，这个是因为没有安装 mariadb-devel 导致的。
- ``configure: error: Invalid NET-SNMP directory - unable to find net-snmp-config"，这个是因为没有安装 net-snmp net-snmp-devel 导致的。
- 配置到数据库的时候，出现 ``Error connecting to database: No such file or directory"，最后发现是因为 mysqli 下使用 localhost 作为地址连接 mysql 数据库的问题，真奇怪，改成 127.0.0.1 就好了...

以上。