

分布式系统监控 zabbix

搭建 zabbix 监控环境

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1. Zabbix 简介

1.1. 介绍

Zabbix 基于 WEB 界面的提供分布式系统监视以及网络监视功能的企业级的开源解决方案。

zabbix 能监视各种网络参数，保证服务器系统的安全运营；并提供灵活的通知机制以让系统管理员快速定位/解决存在的各种问题。

zabbix 由 2 部分构成，zabbix server(服务端)与可选组件 zabbix agent（客户端）。

zabbix agent 需要安装在被监视的目标服务器上，它主要完成对硬件信息或与操作系统有关的内存，CPU 等信息的收集。zabbix agent 可以运行在 Linux, Solaris, HP-UX, AIX, Free BSD, Open BSD, OS X, Tru64/OSF1, Windows NT4.0, Windows (2000/2003/XP/Vista)等系统之上。

zabbix server 可以单独监视远程服务器的服务状态；同时也可以与 zabbix agent 配合，可以轮询 zabbix agent 主动接收监视数据（agent 方式），同时还可被动接收 zabbix agent 发送的数据（trapping 方式）。

1.2. zabbix 的主要特点：

- 安装与配置简单，学习成本低
- 支持多语言（包括中文）

- 免费开源
- 自动发现服务器与网络设备
- 分布式监视以及 WEB 集中管理功能
- 可以无 agent 监视
- 用户安全认证和灵活的授权方式
- 通过 WEB 界面设置或查看监视结果
- email 等通知功能等

1.3.Zabbix 主要功能：

- CPU 负荷
- 内存使用
- 磁盘使用
- 网络状况
- 端口监视
- 日志监视。

2. CentOS7

2.1. 虚拟机安装操作步骤

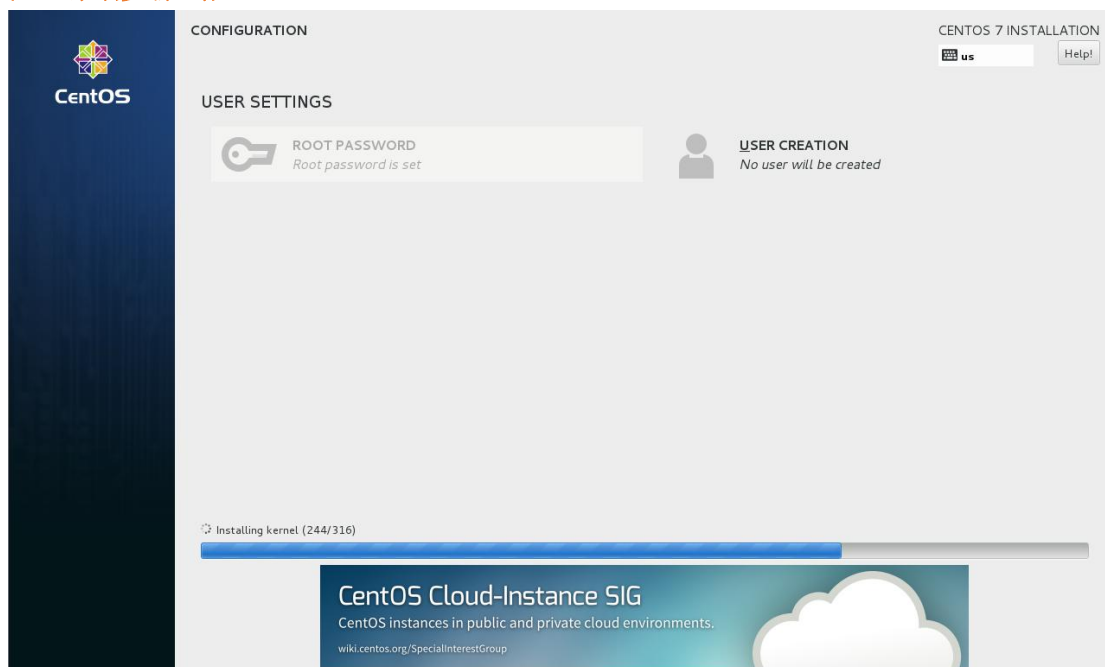
执行 VMware-workstation-full-11.1.0-2496824.exe

安装成功后出现，点击“新建虚拟机”，选择文件

CentOS-7-x86_64-Minimal-1503-01.iso

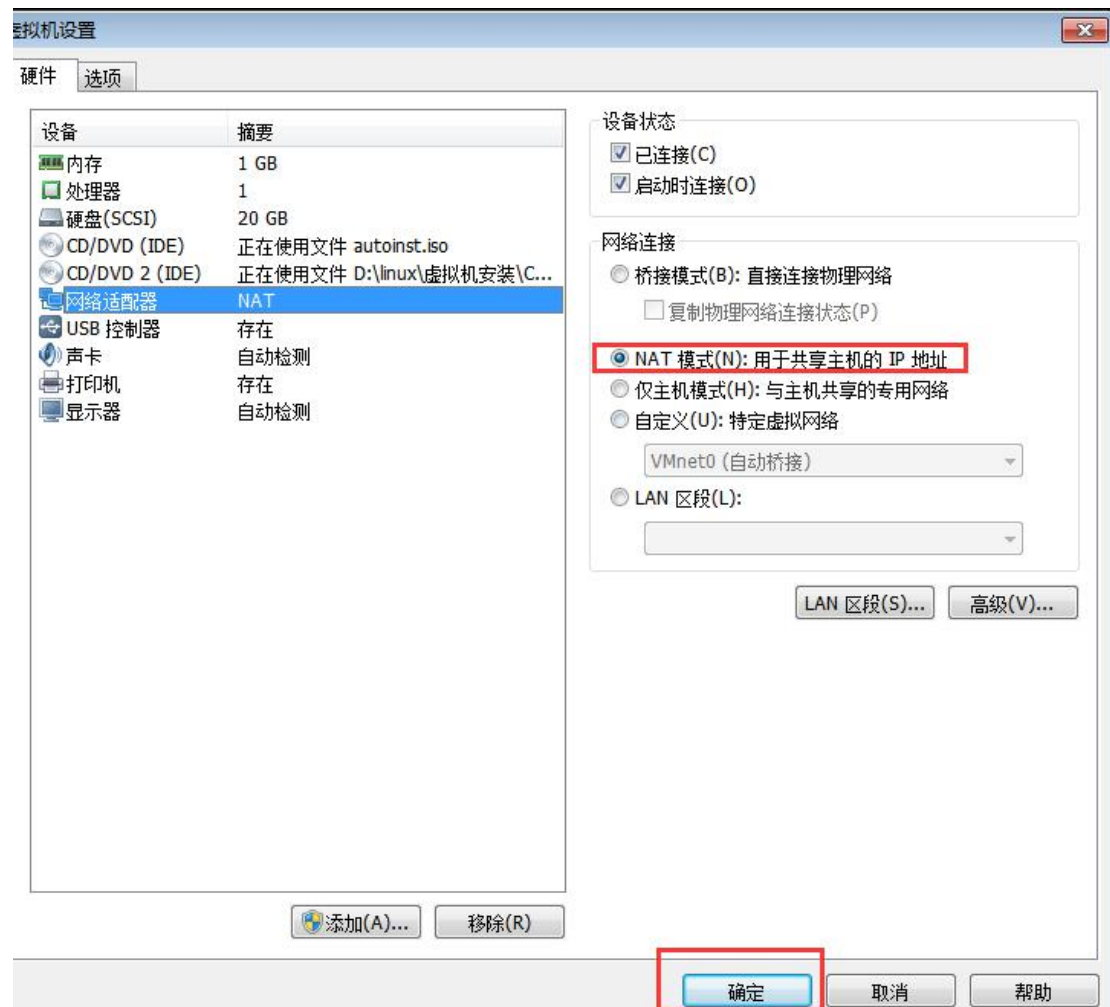
CentOS-7-x86_64-Minimal-1503-01.iso

注：详细步骤 略



2.2. 网卡配置

1. 打开设置



2. 修改配置文件

Vi /etc/sysconfig/network-scripts/ifcfg-eno16777736

内容如下:

```
TYPE=Ethernet
BOOTPROTO=dhcp
IPADDR=192.168.1.227
NETMASK=255.255.255.0
GATEWAY=192.168.1.1
DEFROUTE=yes
```



```

PEERDNS=yes
PEERROUTES=yes
IPV4_FAILURE_FATAL=no
IPV6INIT=yes
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_PEERDNS=yes
IPV6_PEERROUTES=yes
IPV6_FAILURE_FATAL=no
NAME=eno16777736
UUID=3a638c4a-6d63-45af-a6d7-12d3f7522602
DEVICE=eno16777736
ONBOOT=yes
DNS1=114.114.114.114
MACADDR=00:0C:29:19:01:41

```

配置完成后，ping 192.168.1.227 是否正常连通

```

[root@localhost network-scripts]# ping www.baidu.com
PING www.a.shifen.com (180.97.33.108) 56(84) bytes of data.
64 bytes from 180.97.33.108: icmp_seq=1 ttl=128 time=7.56 ms
64 bytes from 180.97.33.108: icmp_seq=1 ttl=128 time=8.56 ms (DUP!)
164 bytes from 180.97.33.108: icmp_seq=1 ttl=128 time=8.58 ms (DUP!)

```

3. 使用“ifconfig”命令

```

[root@localhost network-scripts]# yum provides ifconfig
Loaded plugins: fastestmirror
base
extras
updates
(1/4): base/7/x86_64/group_gz
(2/4): extras/7/x86_64/primary_db
(3/4): base/7/x86_64/primary_db
(4/4): updates/7/x86_64/primary_db
Determining fastest mirrors
 * base: centos.ustc.edu.cn
 * extras: mirrors.cug.edu.cn
 * updates: centos.ustc.edu.cn
base/7/x86_64/filelists_db
extras/7/x86_64/filelists_db
updates/7/x86_64/filelists_db
net-tools-2.0-0.17.20131004git.el7.x86_64 : Basic networking tools
Repo      : base
Matched from:
Filename  : /sbin/ifconfig

```

Complete!

```

[root@localhost network-scripts]# yum install net-tools

```

安装成功后，测试 ifconfig 出现以下界面。

```

[root@localhost network-scripts]# ifconfig
eno16777736: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.84.129 netmask 255.255.255.0 broadcast 192.168.84.255
    inet6 fe80::20c:29ff:fe19:142 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:19:01:42 txqueuelen 1000 (Ethernet)
    RX packets 16253 bytes 23713221 (22.6 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5429 bytes 337113 (329.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 0 (Local Loopback)
    RX packets 808 bytes 70264 (68.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 808 bytes 70264 (68.6 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

```

4. 设置时间

查看系统时间 `#date`

修改时间年月日: `#date -s yyyy/mm/dd` 比如: `date -s 2016/07/07`

修改时间时分秒: `#date -s 9:03:22`

修改时区:

`#cp -f /usr/share/zoneinfo/Asia/Shanghai /etc/localtime`

提示是否覆盖,输入 Y 回车,

修改完后执行 `clock -w` 注: 强制将时间写入 coms!

很多人修改之后都是, 没有写入 `clock -w`, 强制将时间写入 **COMS!** 导致重启之后又还原了

安装 ntpdate, `yum install -y ntpdate`

利用 ntpdate 同步标准时间: `# ntpdate us.pool.ntp.org`

3. 防火墙配置

CentOS 7.0 默认使用的是 firewall 作为防火墙，这里改为 iptables 防火墙。

3.1. 关闭 firewall:

`systemctl stop firewalld.service` #停止 firewall

`systemctl disable firewalld.service` #禁止 firewall 开机启动

3.2. 安装 iptables 防火墙

`yum install iptables-services` #安装

`vi /etc/sysconfig/iptables` #编辑防火墙配置文件

```
# sample configuration for iptables service
# you can edit this manually or use system-config-firewall
# please do not ask us to add additional ports/services to this default configuration
*filter
:INPUT ACCEPT [0:0]
:FORWARD ACCEPT [0:0]
:OUTPUT ACCEPT [0:0]
-A INPUT -m state --state RELATED,ESTABLISHED -j ACCEPT
-A INPUT -p icmp -j ACCEPT
-A INPUT -i lo -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 22 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 80 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 3306 -j ACCEPT
-A INPUT -j REJECT --reject-with icmp-host-prohibited
-A FORWARD -j REJECT --reject-with icmp-host-prohibited
COMMIT
```

增加80和3306端口，后续会用到

`systemctl restart iptables.service` #最后重启防火墙使配置生效

`systemctl enable iptables.service` #设置防火墙开机启动

3.3. 关闭 SELINUX

```
vi /etc/selinux/config
```

```
#SELINUX=enforcing #注释掉
```

```
#SELINUXTYPE=targeted #注释掉
```

```
SELINUX=disabled #增加
```

```
:wq! #保存退出
```

```
setenforce 0 #使配置立即生效
```

4. Apache

4.1. 安装

查看是否有 apache 包 `rpm -qa|grep httpd`

查看已安装的 `yum list|grep httpd`

`yum install httpd` #根据提示，输入 Y 安装即可成功安装

`systemctl start httpd.service` #启动 apache

`systemctl enable httpd.service` #设置 apache 开机启动

`systemctl stop httpd.service` #停止 apache

`systemctl restart httpd.service` #重启 apache

测试是否安装成功

查看 IP 地址: `ifconfig`

网页地址测试, <http://ip:80/>

4.2. Apache 配置(可选)

```
#
# ServerAdmin: Your address, where problems with the server should be
# e-mailed. This address appears on some server-generated pages, such
# as error documents. e.g. admin@your-domain.com
#
# ServerAdmin 1074826544@qq.com 设置管理员邮箱地址
#
# ServerName gives the name and port that the server uses to identify itself.
# This can often be determined automatically, but we recommend you specify
# it explicitly to prevent problems during startup.
#
# If your host doesn't have a registered DNS name, enter its IP address here.
#
# ServerName test.com:80 设置服务名称
#
# Deny access to the entirety of your server's filesystem. You must
```

5. Mysql(MariaDB)

CentOS 7.0 中，已经使用 MariaDB 替代了 MySQL 数据库

5.1. 安装

`yum install mariadb mariadb-server` #询问是否要安装，输入 Y 即可
自动安装,直到安装完成

`systemctl start mariadb.service` #启动 MariaDB

`systemctl enable mariadb.service` #设置开机启动

`systemctl stop mariadb.service` #停止 MariaDB

`systemctl restart mariadb.service` #重启 MariaDB

5.2. 为 root 账户设置密码

`cp /usr/share/mysql/my-huge.cnf /etc/my.cnf` #拷贝配置文件（注意：
如果/etc 目录下面默认有一个 my.cnf，直接覆盖即可）

`mysql_secure_installation`

回车，根据提示输入 Y

输入 2 次密码，回车

根据提示一路输入 Y

最后出现：Thanks for using MySQL!（如图）

MySql 密码设置完成，重新启动 MySQL：

`systemctl restart mariadb.service` #重启 MariaDB

```
Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access. This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
[root@localhost ~]# sysytemctl restart mariadb.service
-bash: sysytemctl: command not found
[root@localhost ~]# systemctl restart mariadb.service
[root@localhost ~]#
```

5.3. 进入 MySQL 控制面板

`mysql -u root -p`

`grant all on *.* to 'zabbix'@'localhost' identified by '12345';`

```

[root@localhost ~]# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 4
Server version: 5.5.47-MariaDB-log MariaDB Server

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> _

IS at Time 1
MariaDB [(none)]> grant all on *.* to 'zabbix'@'localhost' identified by '12345';
Query OK, 0 rows affected (0.00 sec)

```

5.4. 防火墙设置

必须放开 mysql 使用的 TCP 端口，通常都是 3306。

操作请见 [第三章 防火墙配置](#)

5.5. 大小写敏感

在/etc/my.cnf 中的[mysqld]后添加添加 lower_case_table_names=0

其中 0：区分大小写，1：不区分大小写

重启 MYSQL 服务，这时已设置成功

Vi /etc/my.cnf

```

interactive_timeout
lower_case_table_names=1

```

5.6. 配置 MariaDB 的字符集

文件/etc/my.cnf

vi /etc/my.cnf

在[mysqld]标签下添加

init_connect='SET collation_connection = utf8_unicode_ci'

init_connect='SET NAMES utf8'

```
character-set-server=utf8
```

```
collation-server=utf8_unicode_ci
```

```
skip-character-set-client-handshake
```

文件/etc/my.cnf.d/client.cnf

```
vi /etc/my.cnf.d/client.cnf
```

在[client]中添加

```
default-character-set=utf8
```

文件/etc/my.cnf.d/mysql-clients.cnf

```
vi /etc/my.cnf.d/mysql-clients.cnf
```

在[mysql]中添加

```
default-character-set=utf8
```

全部配置完成，重启 mariadb

```
systemctl restart mariadb
```

之后进入 MariaDB 查看字符集

5.7. MariaDB 查看字符集

```
[root@localhost ~]# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 5.5.47-MariaDB-log MariaDB Server

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement

MariaDB [(none)]> show variables like '%collation%'
-> ;
+-----+-----+
| Variable_name | Value |
+-----+-----+
| collation_connection | utf8_unicode_ci |
| collation_database | utf8_unicode_ci |
| collation_server | utf8_unicode_ci |
+-----+-----+
3 rows in set (0.00 sec)

MariaDB [(none)]>
```

6. PHP

6.1. 安装

yum install php #根据提示输入 Y 直到安装完成

安装 PHP 组件，使 PHP 支持 MariaDB

yum install php-mysql

yum install php-gd libjpeg*

yum install php-ldap

yum install php-odbc

yum install php-pear

yum install php-xmlrpc

yum install php-mbstring

```
yum install php-bcmath
```

```
systemctl restart mariadb.service #重启 MariaDB
```

```
systemctl restart httpd.service #重启 apache
```

6.2. 配置

6.2.1. Apache 配置

```
vi /etc/httpd/conf/httpd.conf #编辑文件
```

`ServerSignature On` #添加，在错误页中显示 Apache 的版本，`Off` 为不显示

`Options Indexes FollowSymLinks` #修改为：`Options Includes ExecCGI FollowSymLinks`（允许服务器执行 CGI 及 SSI，禁止列出目录）

`#AddHandler cgi-script .cgi` #修改为：`AddHandler cgi-script .cgi .pl`
（允许扩展名为.pl 的 CGI 脚本运行）

`AllowOverride None` #修改为：`AllowOverride All`（允许.htaccess）

`AddDefaultCharset UTF-8` #修改为：`AddDefaultCharset GB2312`
（添加 GB2312 为默认编码）

`#Options Indexes FollowSymLinks` #修改为 `Options FollowSymLinks`（不在浏览器上显示树状目录结构）

DirectoryIndex index.html #修改为: DirectoryIndex index.php

(设置默认首页文件, 增加 index.php)

MaxKeepAliveRequests 500 #添加 MaxKeepAliveRequests 500

(增加同时连接数)

:wq! #保存退出

systemctl restart httpd.service #重启 apache

rm -f /etc/httpd/conf.d/welcome.conf /

var/www/error/noindex.html #删除默认测试页

```
[root@localhost ~]#
[root@localhost ~]# systemctl restart httpd.service
[root@localhost ~]# cd /etc/httpd/conf.d/welcome.conf
-bash: cd: /etc/httpd/conf.d/welcome.conf: Not a directory
[root@localhost ~]# cd /etc/httpd/conf.d
[root@localhost conf.d]# ll
total 20
-rw-r--r--. 1 root root 2926 May 12 03:27 autoindex.conf
-rw-r--r--. 1 root root 691 May 12 06:49 php.conf
-rw-r--r--. 1 root root 366 May 12 03:28 README
-rw-r--r--. 1 root root 1252 May 12 03:16 userdir.conf
-rw-r--r--. 1 root root 824 May 12 03:16 welcome.conf
[root@localhost conf.d]# rm -rf welcome.conf
[root@localhost conf.d]# cd /var/www
```

6.2.2. Php 配置

vi /etc/php.ini #编辑

date.timezone = #把前面的分号去掉, 改为 date.timezone =

Asia/shanghai

#列出 PHP 可以禁用的函数，如果某些程序需要用到这个函数，可以删除，取消禁用。

`expose_php = Off` #禁止显示 php 版本的信息

`short_open_tag = ON` #支持 php 短标签

`open_basedir = ./tmp/` #设置表示允许访问当前目录(即 PHP 脚本文件所在之目录)和/tmp/目录,可以防止 php 木马跨站,如果改了之后安装程序有问题(例如: 织梦内容管理系统),可以注销此行,或者直接写上程序的目录/data/www.osyunwei.com/./tmp/

`post_max_size = 16M`

`max_execution_time = 300`

`max_input_time = 300`

根据需求配置大小

`systemctl restart mariadb.service` #重启 MariaDB

`systemctl restart httpd.service` #重启 apache

6.2.3. 日志读写（可选）

```
; Default Value: E_ALL & E_NOTICE & E_STRICT & E_DEPRECATED
; Development Value: E_ALL
; Production Value: E_ALL & ~E_DEPRECATED & ~E_STRICT
; http://php.net/error-reporting
;error_reporting = E_ALL & ~E_DEPRECATED & ~E_STRICT
error_reporting = E_ALL & !E_STRICT
; This directive controls whether or not and where PHP will output errors,
; notices and warnings too. Error output is very useful during development
; it could be very dangerous in production environments. Depending on the
; which is triggering the error, sensitive information could potentially be
; out of your application such as database usernames and passwords or worse
; It's recommended that errors be logged on production servers rather than
; having the errors sent to STDOUT
```

```

; Log errors to specified file. PHP's default behavior is to leave this value
; empty.
; http://php.net/error-log
; Example:
error_log = /tmp/php_errors.log
; Log errors to syslog (Event Log on NT, not valid in Windows 95).
error_log = syslog

;windows.show_crt_warning
; Default value: 0
; Development value: 0
; Production value: 0

;;;;;;;;;;;;;;;;;;;;;;;;
; Data Handling ;
;;;;;;;;;;;;;;;;;;;;;;;;

-- INSERT --

```

6.3. 版本

```

[root@localhost www]# php -v
PHP 5.4.16 (cli) (built: May 12 2016 13:45:17)
Copyright (c) 1997-2013 The PHP Group
Zend Engine v2.4.0, Copyright (c) 1998-2013 Zend Technologies
[root@localhost www]# systemctl restart httpd.service
[root@localhost www]#

```

6.4. 测试安装成功

cd /var/www/html

vi index.php #输入下面内容

```
<?php
```

```
phpinfo();
```

```
?>
```

http://ip/

PHP Version 5.4.16



System	Linux localhost.localdomain 3.10.0-229.el7.x86_64 #1 SMP Fri Mar 6 11:36:42 UTC 2015 x86_64
Build Date	May 12 2016 13:46:18
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/bcmath.ini, /etc/php.d/curl.ini, /etc/php.d/dom.ini, /etc/php.d/fileinfo.ini, /etc/php.d/gd.ini, /etc/php.d/json.ini, /etc/php.d/ldap.ini, /etc/php.d/mbstring.ini, /etc/php.d/mysql.ini,

7. Zabbix

下载 zabbix 包地址如下:

<http://jaist.dl.sourceforge.net/project/zabbix/ZABBIX%20Latest%20Stable/3.0.3/zabbix-3.0.3.tar.gz>

将 zabbix-3.0.3.tar.gz 拷贝到服务器上。并解决

```

[root@localhost ~]# tar -xvf zabbix-3.0.3.tar.gz_
zabbix-3.0.3/
zabbix-3.0.3/appliance/
zabbix-3.0.3/appliance/...
[root@localhost mysql]# mv /usr/local/zabbix-3.0.3 /usr/local/src/
[root@localhost mysql]# cd /usr/local/src/zabbix-3.0.3/database/mysql/
[root@localhost mysql]# ll
total 3012
-rw-r--r--. 1 guoli2 guoli2 990351 May 18 06:09 data.sql
-rw-r--r--. 1 guoli2 guoli2 1978341 May 18 05:59 images.sql
-rw-r--r--. 1 guoli2 guoli2 113197 May 18 06:09 schema.sql
[root@localhost mysql]#

```

7.1. 配置 mysql 数据库

```

zabbix-3.0.3/upgrade/dbpatches/2.2/postgresql/1010301.sql
zabbix-3.0.3/upgrade/dbpatches/2.2/
zabbix-3.0.3/upgrade/dbpatches/2.2/README
[root@localhost src]#
[root@localhost src]#
[root@localhost src]# cd /usr/local/src/zabbix-3.0.3/database/mysql/
[root@localhost mysql]# ls
data.sql  images.sql  schema.sql
[root@localhost mysql]# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 2
Server version: 5.5.47-MariaDB-log MariaDB Server

Copyright (c) 2000, 2015, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database zabbix character set utf8;
Query OK, 1 row affected (0.00 sec)

MariaDB [(none)]> insert into mysql.user(host,User,Password) values('localhost','zabbix',password('12345'));
Query OK, 1 row affected, 4 warnings (0.00 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> grant all on zabbix.* to 'zabbix'@'127.0.0.1' identified by '12345' with grant option;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MariaDB [(none)]> _
  
```

1. 进入mysql 数据库目录

2. 查看三个文件 3. 进入mysql控制台

数据库编码使用设置

新建账户和密码

账户授权

刷新系统授权表

Show databases;

Use zabbix;

Show tables;

7.2. 导入 zabbix 数据库

Use zabbix //进入该数据库

导入脚本文件到 zabbix 数据库，三个 **sql** 文件顺序不能调换。否则会出错

Source /usr/local/src/zabbix-3.0.3/database/mysql/schema.sql

Source /usr/local/src/zabbix-3.0.3/database/mysql/images.sql

Source /usr/local/src/zabbix-3.0.3/database/mysql/data.sql

导入成功后退出 mysql 控制台 exit

7.3. 安装步骤 zabbix

7.3.1. 添加用户

```

MariaDB [zabbix]>
MariaDB [zabbix]> exit
Bye
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]# groupadd zabbix
[root@localhost mysql]# useradd zabbix -g zabbix -s /bin/false
[root@localhost mysql]#

```

1、创建用户组zabbix
2、创建用户，并把用户加入用户组里

```

Complete!
[root@localhost mysql]# yum install mysql-devel

```

7.3.2. 安装 zabbix

一、添加软连接

```

-bash: !rprint: command not found
[root@localhost mysql]# ln -s /usr/local/lib/libiconv.so.2 /usr/lib/libiconv.so.2
[root@localhost mysql]# /sbin/ldconfig
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#
[root@localhost mysql]#

```

1.添加软连接
2.配置文件立即生效命令

二、配置

```

./configure --prefix=/usr/local/zabbix --enable-server --enable-agent
--with-net-snmp --with-libcurl --enable-proxy
--with-mysql=/usr/bin/mysql_config

```

（因命令太长显示不全，请看上文字）

注：如果没有 mysql_config , 需要安装 yum install mysql-devel


```

TLS: no
ODBC: no
Linker flags: -L/usr/lib64/mysql -L/usr/lib64 -rdyn
Libraries: -lmysqlclient -lnetsnmp -lcurl -lm
Enable proxy: yes
Proxy details: MySQL
With database: yes
WEB Monitoring: yes
SMTP: yes
IPMI: no
SSH: no
TLS: no
ODBC: no
Linker flags: -L/usr/lib64/mysql -L/usr/lib64 -rdyn
Libraries: -lmysqlclient -lnetsnmp -lcurl -lm
Enable agent: yes
Agent details:
TLS: no
Linker flags: -rdynamic -lcurl -lm -ldl -lresolv
Libraries:
Enable Java gateway: no
LDAP support: no
IPv6 support: no
=====
Now run 'make install'
=====
Thank you for using Zabbix!
http://www.zabbix.com
=====

```

三、编译

```
root@localhost zabbix-3.0.3]# make_
```

```

[21]: Leaving directory '/usr/local/src/zabbix-3.0.3'
root@localhost zabbix-3.0.3]# make install

```

四、系统软连接

```

[21]: Nothing to be done for 'install data dm'.
[21]: Leaving directory '/usr/local/src/zabbix-3.0.3'
[11]: Leaving directory '/usr/local/src/zabbix-3.0.3'
root@localhost zabbix-3.0.3]#
root@localhost zabbix-3.0.3]#
root@localhost zabbix-3.0.3]# ln -s /usr/local/zabbix/sbin/* /usr/local/sbin/
root@localhost zabbix-3.0.3]# ln -s /usr/local/zabbix/bin/* /usr/local/bin/
root@localhost zabbix-3.0.3]# _

```

7.3.3. 查看端口

查看是否有 TCP `cat /etc/services |grep zabbix`

```

tcp      0      0 0.0.0.0:3306      0.0.0.0:*
[root@localhost etc]# cat /etc/services |grep zabbix
zabbix-agent 10050/tcp      # Zabbix Agent
zabbix-agent 10050/udp      # Zabbix Agent
zabbix-trapper 10051/tcp      # Zabbix Trapper
zabbix-trapper 10051/udp      # Zabbix Trapper
[root@localhost etc]# _

```

7.3.4. 创建服务

```

[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]# cp /usr/local/src/zabbix-3.0.3/misc/init.d/fedora/core/zabbix_server /etc/rc.d/init.d/zabbix_server
[root@localhost etc]# cp /usr/local/src/zabbix-3.0.3/misc/init.d/fedora/core/zabbix_agentd /etc/rc.d/init.d/zabbix_agentd
[root@localhost etc]# chmod +x /etc/rc.d/init.d/zabbix_server
[root@localhost etc]# chmod +x /etc/rc.d/init.d/zabbix_agentd
[root@localhost etc]# chkconfig zabbix_server on
error reading information on service zabbix_server.conf: No such file or directory
[root@localhost etc]# chkconfig zabbix_server on
[root@localhost etc]# chkconfig zabbix_agentd on
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]#

```

服务器端

客户端

添加脚本执行权限 server

添加脚本执行权限客户端

开启启动 服务端和客户端

```

[root@localhost etc]#
[root@localhost etc]#
[root@localhost etc]# vi /etc/rc.d/init.d/zabbix_server

```

```

# Variables
# Edit these to match your system settings

# Zabbix-Directory
BASEDIR=/usr/local/zabbix/ → zabbix安装目录

# Binary File
BINARY_NAME=zabbix_agentd

# Full Binary File Call
FULLPATH=$BASEDIR/sbin/$BINARY_NAME

# PID file
PIDFILE=/tmp/$BINARY_NAME.pid

# Establish args

```

7.3.5. WEB 界面

```

t ~]# cp -r /usr/local/src/zabbix-3.0.3/frontends/php/ /var/www/html/zabbix
t ~]# chown -R apache.apache /var/www/html/zabbix
t ~]#

```

页面文件

7.3.6. WEB 界面配置

拷贝文件修改文件名：

```
cp /usr/local/src/zabbix-3.0.3/frontends/php/conf/zabbix.conf.php.example /var/www/html/zabbix/conf/zabbix.conf.php
```

/var/www/html/zabbix/conf/zabbix.conf.php

修改 zabbix.conf.php 文件内容如下：

```
<?php
// Zabbix GUI configuration file.
global $DB;

$DB['TYPE'] = 'MYSQL';
$DB['SERVER'] = 'localhost';
$DB['PORT'] = '0';
$DB['DATABASE'] = 'zabbix';
$DB['USER'] = 'zabbix';
$DB['PASSWORD'] = '12345';
// Schema name. Used for IBM DB2 and PostgreSQL.
$DB['SCHEMA'] = '';

$ZBX_SERVER = '192.168.1.227';
$ZBX_SERVER_PORT = '10051';
$ZBX_SERVER_NAME = '';

$IMAGE_FORMAT_DEFAULT = IMAGE_FORMAT_PNG;
```

7.3.7. zabbix server.conf

注：详细配置，提供了配置文件直接拷贝覆盖，修改 IP 和 password

文件路径：/usr/local/zabbix/etc/zabbix_server.conf

修改文件内容如下图：

cat /usr/local/zabbix/etc/zabbix_server.conf |grep -v ^#|grep -v ^\$

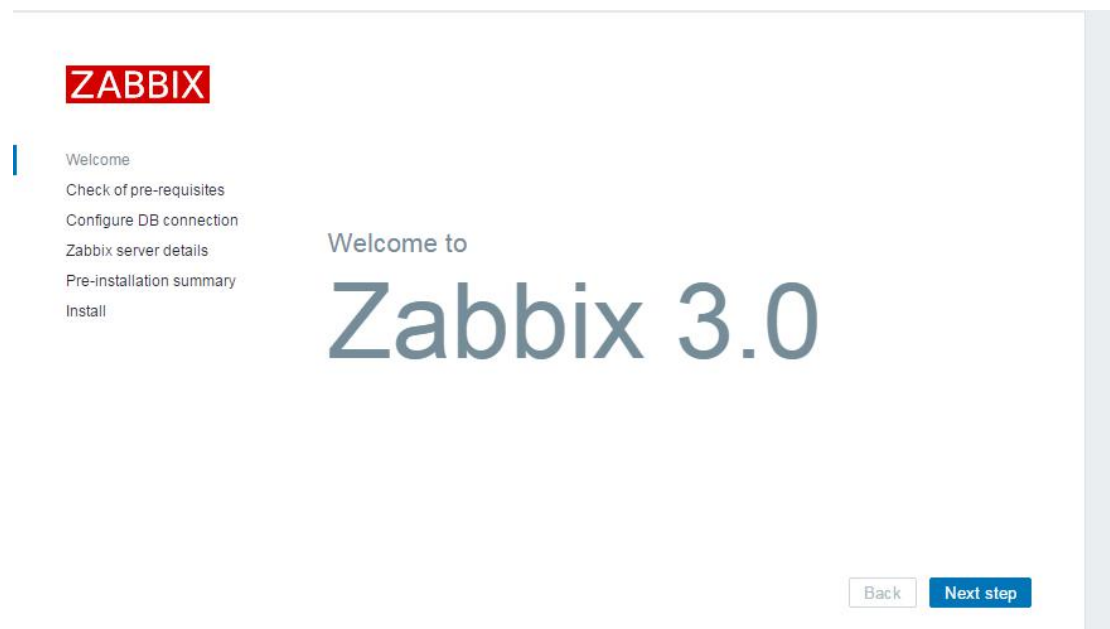
```
cat /usr/local/zabbix/etc/zabbix_server.conf |grep -v ^#|grep -v ^$
[root@localhost ~]# cat /usr/local/zabbix/etc/zabbix_server.conf |grep -v ^#|grep -v ^$
SourceIP=192.168.1.226
LogFile=/tmp/zabbix_server.log
DebugLevel=2
DBHost=localhost
DBName=zabbix
DBUser=zabbix
DBPassword=12345
JavaGateway=192.168.1.226
StartJavaPollers=5
ListenIP=192.168.1.226
Timeout=4
AlertScriptsPath=/usr/local/zabbix/share/zabbix/alertscripts
LogSlowQueries=3000
[root@localhost ~]#
```

7.3.8. 开启服务

```
[root@localhost etc]# chkconfig zabbix_server on
[root@localhost etc]# chkconfig zabbix_agentd on
[root@localhost etc]#
[root@localhost etc]# /etc/init.d/zabbix_server start
Starting zabbix_server (via systemctl): [ OK ]
[root@localhost etc]# /etc/init.d/zabbix_agentd start
Starting zabbix_agentd (via systemctl): [ OK ]
[root@localhost etc]# netstat -ntlp|grep -E '1005|3306|80'
tcp        0      0 192.168.1.227:10051  0.0.0.0:*        LISTEN      11468/zabbix_server
tcp        0      0 0.0.0.0:3306        0.0.0.0:*        LISTEN      1946/mysqld
tcp6       0      0 :::80              :::*              LISTEN      994/httpd
[root@localhost etc]#
```

7.3.9. 安装 WEB 程序

<http://192.168.84.128/zabbix/setup.php> （<http://IP/zabbix/>）



ZABBIX

Check of pre-requisites

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

	CURRENT VALUE	REQUIRED	
PHP version	5.4.16	5.4.0	OK
PHP option "memory_limit"	128M	128M	OK
PHP option "post_max_size"	16M	16M	OK
PHP option "upload_max_filesize"	2M	2M	OK
PHP option "max_execution_time"	300	300	OK
PHP option "max_input_time"	300	300	OK
PHP option "date.timezone"	PRC		OK
PHP databases support	MySQL SQLite3		OK
PHP bcmath	on		OK

如果有error请检查php.ini 文件配置

[Back](#)[Next step](#)**ZABBIX**

Configure DB connection

Please create database manually, and set the configuration parameters for connection to this database. Press "Next step" button when done.

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Database type

Database host

Database port 0 - use default port

Database name

User

Password

[Back](#)[Next step](#)

ZABBIX

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Zabbix server details

Please enter the host name or host IP address and port number of the Zabbix server, as well as the name of the installation (optional).

Host

Port

Name

Back

Next step

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ZABBIX

Welcome
Check of pre-requisites
Configure DB connection
Zabbix server details
Pre-installation summary
Install

Pre-installation summary

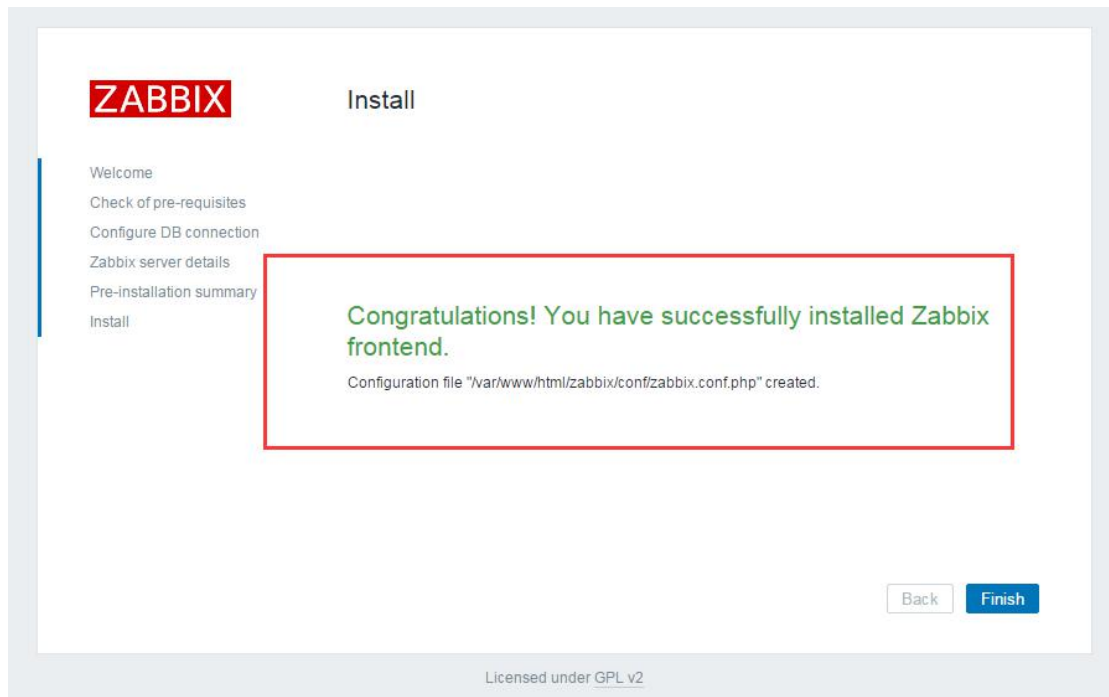
Please check configuration parameters. If all is correct, press "Next step" button, or "Back" button to change configuration parameters.

Database type	MySQL
Database server	127.0.0.1
Database port	default
Database name	zabbix
Database user	zabbix
Database password	*****
Zabbix server	localhost
Zabbix server port	10051
Zabbix server name	

Back

Next step

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7.3.10. WEB 平台介绍

Url: `http://IP/zabbix`

账户: `admin`

密码: `zabbix`

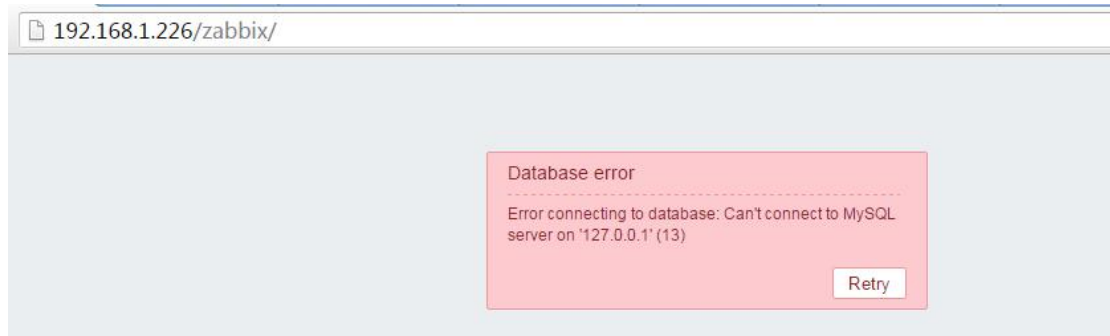
7.3.11. 转换中文字体

解决: 图表中的中文乱码

将文件 `DejaVuSans.ttf` 上传到 `/var/www/html/zabbix/fonts` 替换此文件即可。

7.4. 常见问题

7.4.1. Database error



原因:

```
#getsebool -a | grep httpd
```

```
[neo@neo phpMyTest]$ getsebool -a | grep httpd
```

发现 httpd_can_network_connect --> off

解决方案:

```
#setsebool httpd_can_network_connect 1
```

7.4.2. Mysql sock 錯誤

日誌文件 cat /tmp zabbix_server.log

```
1168:20180628:003146.210 lrvo support: NO
1168:20180628:003146.210 TLS support: NO
1168:20180628:003146.210 *****
1168:20180628:003146.210 using configuration file: /usr/local/zabbix/etc/zabbix_server.conf
1168:20180628:003146.282 [Z3001] connection to database 'zabbix' failed: [2002] Can't connect to local MySQL server through socket '/var/lib/mysql/mysql.sock' (111)
1168:20180628:003146.320 Cannot connect to the database. Exiting...
```

7.4.3. zabbix server is not running

正常安装完 zabbix 后，登录后 zabbix 监控报错 zabbix server is not running: the information displayed may not be current,

A screenshot of a Zabbix server status message. It consists of a light blue header bar and a yellow body bar. The text in the yellow bar reads: "Zabbix server is not running: the information displayed may not be current."

```
netstat -ntlp|grep -E '10051'
```

Zabbix server 没有启动，请查看 `zabbix.conf.php` 配置文件

8. Zabbix_agent 安装

8.1. Window 64

提供资料里《zabbix 客户端-window》里面的 `zabbix` 文件拷贝到 C 盘下。

1. 配置

修改文件内容 `zabbix_agentd.conf`，以下内容值，

`SourceIP=192.168.1.227` （zabbix 服务 IP 地址）

`Server=192.168.1.227` （zabbix 服务 IP 地址）

`ListenIP=192.168.1.18` （监测 IP 地址<本 IP>）

`Hostname=WIN-S80N8B9NA2I` （监测 IP 地址<本 hostname>）

A screenshot of a Windows command prompt window. The title bar is black with white text. The command prompt shows the command `C:\Users\Administrator>hostname` and the output `WIN-BUSOAD7BMUK` on the next line.

2. 安装

```
c:\zabbix>zabbix_agentd.exe --install -c "c:\zabbix\zabbix_agentd.conf"
```

```
C:\>zabbix_agentd.exe --install
zabbix_agentd.exe [5352]: service [Zabbix Agent] installed successfully
zabbix_agentd.exe [5352]: event source [Zabbix Agent] installed successfully

C:\>zabbix_agentd.exe --start
zabbix_agentd.exe [4560]: service [Zabbix Agent] started successfully
```

3. 检查

```
C:\zabbix>netstat -an |findstr 10050
TCP        192.168.1.14:10050    0.0.0.0:0            LISTENING
C:\zabbix>_
```

4. 防火墙（可选）

高级安全 windows 防火墙——入站规则——新建入站规则——端口——TCP 特定本地端口 10050——下一步——下一步——名称 zabbix——完成

8.2. Linux

1. 安装

```
cd /usr/local/src/zabbix-3.0.3/
```

```
./configure --prefix=/etc/zabbix_agent --enable-agent
```

```
make install
```

```
[root@localhost network-scripts]#
[root@localhost network-scripts]# cd /usr/local/src/zabbix-3.0.3/
[root@localhost zabbix-3.0.3]# ./configure --prefix=/etc/zabbix_agent --enable-agent
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
configure: Configuring Zabbix 3.0.3
```

```
*****
*          Now run 'make install'          *
*                                          *
*          Thank you for using Zabbix!     *
*          <http://www.zabbix.com>        *
*****
```

```
[root@localhost zabbix-3.0.3]# make install
```

2. Zabbix agent.conf

注：详细配置，提供了配置文件直接拷贝覆盖，修改 IP 和 password

```
cat /usr/local/zabbix/etc/zabbix_agentd.conf |grep -v ^#|grep -v ^$
```

```
[root@localhost etc]#
[root@localhost etc]# vi /usr/local/zabbix/etc/zabbix_agentd.conf
```

```
[root@localhost fedora]# cat /usr/local/zabbix/etc/zabbix_agentd.conf |grep -v ^#|grep -v ^$
PidFile=/tmp/zabbix_agentd.pid
LogFile=/tmp/zabbix_agentd.log
DebugLevel=2
EnableRemoteCommands=1
LogRemoteCommands=1
Server=192.168.1.227
ListenPort=10050
ListenIP=192.168.1.227
StartAgents=8
ServerActive=192.168.1.227
Hostname=localhost
AllowRoot=1
User=zabbix-agent
Include=/usr/local/zabbix/etc/zabbix_agentd.conf.d/
UnsafeUserParameters=1
```

说明：**ServerActive** 是指定 **Agentd** 收集的数据往哪里发送，**Hostname** 是必须要和 **Server** 端添加主机时的主机名一样，这样 **Server** 端接收到数据才能找到对应关系。

3. 创建服务

```
cp /usr/local/src/zabbix-3.0.3/misc/init.d/fedora/core/zabbix_agentd
```

```
/etc/rc.d/
```


```
init.d/zabbix_agentd
```

```
chmod +x /etc/rc.d/init.d/zabbix_agentd
```

chkconfig zabbix_agentd on

```
[root@localhost etc]#
[root@localhost etc]# vi /etc/rc.d/init.d/zabbix_agentd
```

```
# Variables
# Edit these to match your system settings

# Zabbix-Directory
BASEDIR=/usr/local/zabbix/  zabbix安装目录

# Binary File
BINARY_NAME=zabbix_agentd

# Full Binary File Call
FULLPATH=$BASEDIR/sbin/$BINARY_NAME

# PID file
PIDFILE=/tmp/$BINARY_NAME.pid

# Establish args
```

/etc/rc.d/init.d/zabbix_agentd start

netstat -nltp|grep -E '1005'

```
[root@localhost fedora]# /etc/rc.d/init.d/zabbix_agentd start
Starting zabbix_agentd (via systemctl): [ OK ]
[root@localhost fedora]#
[root@localhost fedora]# netstat -nltp|grep -E '1005'
tcp        0      0 192.168.1.227:10050  0.0.0.0:*        LISTEN      10583/zabbix_agentd
tcp        0      0 192.168.1.227:10051  0.0.0.0:*        LISTEN      10306/zabbix_server
[root@localhost fedora]#
```

8.3. 常见的问题

8.3.1. Starting zabbix_agentd:

zabbix_agentd [10452]: user zabbix-agent does not exist

zabbix_agentd [10452]: cannot run as root!

[FAILED]

解决方案:

cat /etc/passwd |grep zabbix-agent

修改 zabbix_agent.conf 文件, 将 AllowRoot 改为 1

```

### 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=1

```

9. Tomat 监控

9.1. JDK 安装

```
mkdir -p /usr/lib/jvm
```

```
cd /usr/lib/jvm
```

```
tar -zxvf /usr/local/jdk-8u91-linux-x64.gz
```

```
vi /etc/profile
```

在最后添加：

```
export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_91
```

```
export JRE_HOME=${JAVA_HOME}/jre
```

```
export CLASSPATH=.:${JAVA_HOME}/lib:${JRE_HOME}/lib
```

```
export PATH=${JAVA_HOME}/bin:$PATH
```

```

unset i
unset -f pathmunge
export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_91
export JRE_HOME=${JAVA_HOME}/jre
export CLASSPATH=.:${JAVA_HOME}/lib:${JRE_HOME}/lib
export PATH=${JAVA_HOME}/bin:$PATH

```

```
source /etc/profile
```

```
java -version
```

```
root@localhost jvm]# source /etc/profile
root@localhost jvm]# java -version
ava version "1.8.0_91"
ava(TM) SE Runtime Environment (build 1.8.0_91-b14)
ava HotSpot(TM) 64-Bit Server VM (build 25.91-b14, mixed mode)
root@localhost jvm]#
```

9.2. Tomcat 安装

将 apache-tomcat-8.0.36.tar.gz 将文件拷贝到 /usr/local

```
tar -zxvf apache-tomcat-8.0.36.tar.gz
```

```
rm -rf apache-tomcat-8.0.36.tar.gz
```

```
mv apache-tomcat-8.0.36 tomcat
```

```
cd /usr/local/tomcat/bin/
```

```
./startup.sh
```

9.2.1. 防火墙配置

修改文件 vi + /etc/sysconfig/iptables

添加代码:

```
-A INPUT -p tcp -m state --state NEW -m tcp --dport 3306 -j ACCEPT
-A INPUT -p tcp -m state --state NEW -m tcp --dport 8080 -j ACCEPT
```

重启防火墙:

```
Service iptables restart
```

9.2.2. 测试运行

<http://ip:8080/>

9.3. 修改配置

/tomcat/bin/catalina.sh

9.3.1. Window 配置-catalina

如果是 windows 版本，编辑 TOMCAT_HOME/bin/catalina.bat，在开头加入下面几行：

```
set CATALINA_OPTS=%CATALINA_OPTS%  
-Djava.rmi.server.hostname=JMX_HOST  
set CATALINA_OPTS=%CATALINA_OPTS%  
-Djavax.management.builder.initial=  
set CATALINA_OPTS=%CATALINA_OPTS%  
-Dcom.sun.management.jmxremote=true  
set CATALINA_OPTS=%CATALINA_OPTS%  
-Dcom.sun.management.jmxremote.port=JMX_PORT set  
CATALINA_OPTS=%CATALINA_OPTS%  
-Dcom.sun.management.jmxremote.ssl=false  
set CATALINA_OPTS=%CATALINA_OPTS%  
-Dcom.sun.management.jmxremote.authenticate=false
```

9.3.2. Linux 配置-catalina

如果是 linux 版本，编辑 TOMCAT_HOME/bin/catalina.sh，在开头加入下面几行：

```

CATALINA_OPTS="-Dcom.sun.management.jmxremote
-Dcom.sun.management.jmxremote.authenticate=false
-Dcom.sun.management.jmxremote.port=12345
-Dcom.sun.management.jmxremote.ssh=false
-Djava.rmi.server.hostname=192.168.1.226"
#

```

```

CATALINA_OPTS="-Dcom.sun.management.jmxremote
-Dcom.sun.management.jmxremote.authenticate=false
-Dcom.sun.management.jmxremote.port=12345
-Dcom.sun.management.jmxremote.ssh=false
-Djava.rmi.server.hostname=192.168.1.226"

```

9.3.3. Springboot 配置

(springboot 在 run.sh 配置)可选

```

java -server -Xms1024m -Xmx2048m
-Djava.rmi.server.hostname=192.168.1.223
-Dcom.sun.management.jmxremote
-Dcom.sun.management.jmxremote.port=12345
-Dcom.sun.management.jmxremote.ssl=false

```

9.3.4. server.xml 配置

在/usr/local/tomcat/conf/server.xml 文件增加以下代码:

```

<Listener
className="org.apache.catalina.mbeans.JmxRemoteLifecycleList
ener"                                rmiRegistryPortPlatform="12345"
rmiServerPortPlatform="12346"/>

```



```

--> documentation at /docs/config/server.html
<Server port="8005" shutdown="SHUTDOWN">
  <Listener className="org.apache.catalina.startup.VersionLoggerListener" />
  <Listener className="org.apache.catalina.mbeans.JmxRemoteLifecycleListener" rmiRegistryPortPlatform="12345" rmiServerPortPlatform="12345"/>
  <!-- Security listener. Documentation at /docs/config/listeners.html
  <Listener className="org.apache.catalina.security.SecurityListener" />
  -->
  <!--APR library loader. Documentation at /docs/apr.html -->
  <Listener className="org.apache.catalina.core.AprLifecycleListener" SSLEngine="on" />
  <!-- Prevent memory leaks due to use of particular java/javax APIs-->

```

cp catalina-jmx-remote.jar /usr/local/tomcat/lib

catalina-jmx-remote.jar 次包资源文件里。

```

[root@localhost bin]# netstat -nltp|grep -E '80|123'
tcp6      0      0 127.0.0.1:8005          :::*           LISTEN       3283/java
tcp6      0      0 :::8009                :::*           LISTEN       3283/java
tcp6      0      0 :::8080                 :::*           LISTEN       3283/java
tcp6      0      0 :::80                   :::*           LISTEN       1002/httpd
tcp6      0      0 :::12345                :::*           LISTEN       3283/java
[root@localhost bin]#

```

10. 监控 JMX

监控 JMX 应用的程序，称为"Zabbix Java GateWay", 非常方便使用其来监控 JMX

10.1. 安装 zabbix-java-gateway

```
cd /usr/local/src/zabbix-3.0.3/
```

```
./configure --prefix=/usr/local/zabbix/etc/zabbix_java --enable-java
```

```
make && make install
```

```
mkdir /etc/zabbix
```

```
cp /usr/local/zabbix/etc/zabbix_java/sbin/zabbix_java/settings.sh
```

```
/etc/zabbix/zabbix_java_gatwat.conf
```

10.2. 配置

配置文件: /etc/zabbix/zabbix_java_gateway.conf

支持的配置选项为:

名称	选项说明
LISTEN_IP	指定 bind 的地址,默认值为 0.0.0.0
LISTEN_PORT	指定 bind 的端口,默认值为 10052
PID_FILE	指定 PID 文件存放目录, 默认为 /tmp/zabbix_java.pid
START_POLLERS	指定启动多少进程, 默认为 5

```
# Default:
LISTEN_IP="192.168.1.226"

### Option: zabbix.listenPort
#       Port to listen on.
#
# Mandatory: no
# Range: 1024-32767
# Default:
LISTEN_PORT=10052

### Option: zabbix.pidFile
#       Name of PID file.
#       If omitted, Zabbix Java Gateway is started as a console application.
#
# Mandatory: no
# Default:
# PID FILE=

PID_FILE="/tmp/zabbix_java.pid"

### Option: zabbix.startPollers
#       Number of worker threads to start.
#
# Mandatory: no
# Range: 1-1000
# Default:
START_POLLERS=5

### Option: zabbix.timeout
#       How long to wait for network operations.
#
# Mandatory: no
# Range: 1-30
# Default:
# TIMEOUT=3
```

10.3. 修改 zabbix server 配置

```
# cat /usr/local/zabbix-3.0.0/etc/zabbix_server.conf | grep Java |
```

```
grep =
```

```
JavaGateway=127.0.0.1
```

```
JavaGatewayPort=10052
```

```
StartJavaPollers=5
```

10.4. 启动脚本

```
cd /usr/local/zabbix/etc/zabbix_java/sbin/
```

```
[root@localhost init.d]# cd /usr/local/zabbix/etc/zabbix_java/sbin/
[root@localhost sbin]# ll
total 0
drwxr-xr-x 4 root root 79 Jul  7 17:08 zabbix_java
[root@localhost sbin]# cd zabbix_java/
[root@localhost zabbix_java]# ll
total 16
drwxr-xr-x 2 root root  42 Jul  7 17:08 bin
drwxr-xr-x 2 root root 4096 Jul  7 17:08 lib
-rw-r--r-- 1 root root  791 Jul  7 17:08 settings.sh
-rwxr-xr-x 1 root root  554 Jul  7 17:08 shutdown.sh
-rwxr-xr-x 1 root root 2025 Jul  7 17:08 startup.sh
[root@localhost zabbix_java]# ./startup.sh
[root@localhost zabbix_java]#
[root@localhost zabbix_java]# netstat -nltp|grep -E '80|1005|123'
tcp        0      0 192.168.1.227:10050  0.0.0.0:*        LISTEN      10800/zabbix_agentd
tcp        0      0 192.168.1.227:10051  0.0.0.0:*        LISTEN      10306/zabbix_server
tcp6       0      0 :::10052             :::*              LISTEN      10937/java
tcp6       0      0 127.0.0.1:8005       :::*              LISTEN      3283/java
tcp6       0      0 :::8009              :::*              LISTEN      3283/java
tcp6       0      0 :::8080              :::*              LISTEN      3283/java
tcp6       0      0 :::80                :::*              LISTEN      1002/httpd
tcp6       0      0 :::12345             :::*              LISTEN      3283/java
[root@localhost zabbix_java]# rm -rf /etc/rc.d/init.d/zabbix_java_gateway
```

10.5. 重写脚本（可选）

将 zabbix_java_gateway 文件上传到

/etc/rc.d/init.d/zabbix_java_gateway 目录下

```
chmod +x /etc/init.d/zabbix_java_gateway
```

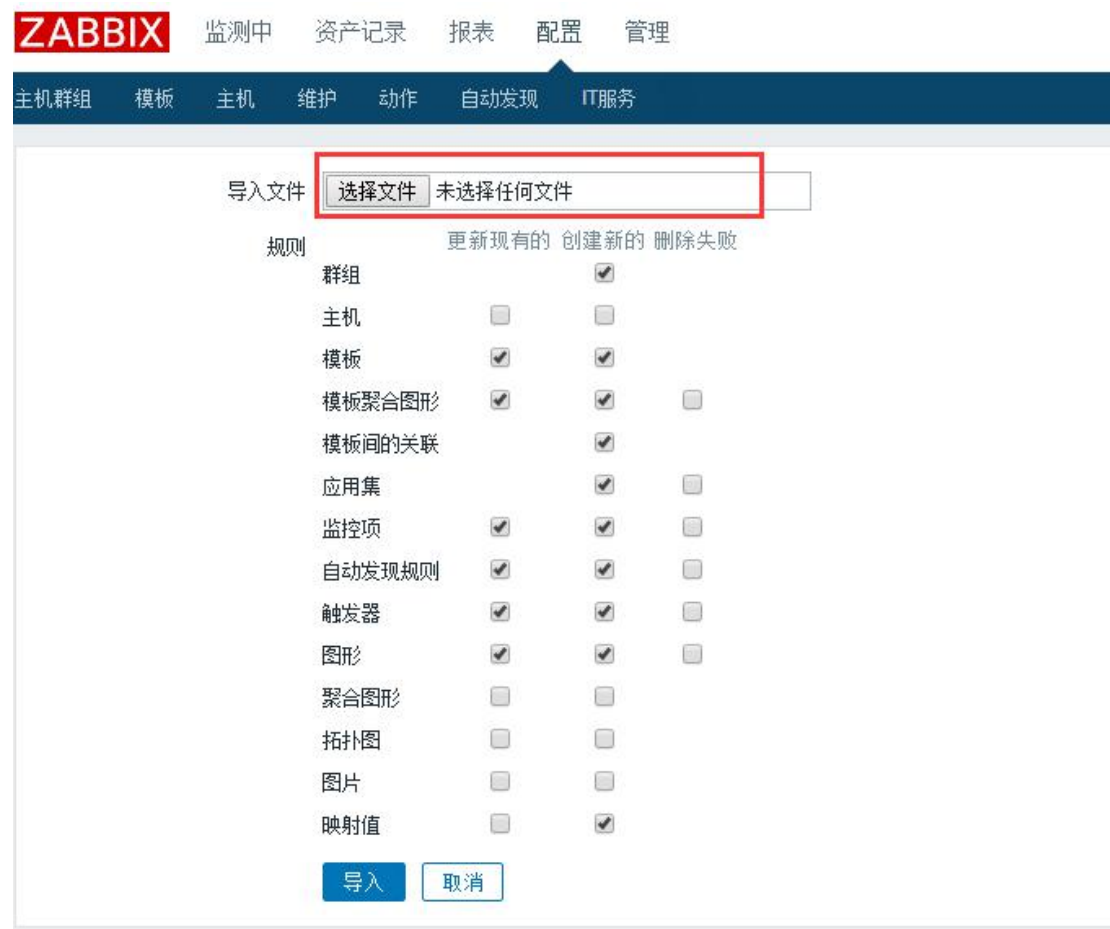
```
chkconfig zabbix_java_gateway on
```

```
service zabbix_java_gateway start
```

```
[root@localhost etc]# service zabbix-java-gateway restart
Restarting zabbix-java-gateway (via systemctl): [ OK ]
[root@localhost etc]# netstat -tnlp | grep 1005
tcp        0      0 192.168.1.226:10050 0.0.0.0:*        LISTEN      1438/zabbix_agentd
tcp        0      0 192.168.1.226:10051 0.0.0.0:*        LISTEN      12019/zabbix_server
tcp6       0      0 :::10052             :::*              LISTEN      12630/java
```

10.6. 导入模板 java

资源文件提供 templates_tomcat.xml 导入到 server 服务



10.7. JVM 部分监控项解释

1	监控项	涵义
2	http-8010 bytes received per second	接收字节数/秒
3	http-8010 bytes sent per second	发送字节数/秒
4	http-8010 errors per second	错误数/秒
5	http-8010 request processing time	请求处理时间
6	http-8010 requests per second	请求数/秒
7	http-8010 threads allocated	已分配线程
8	http-8010 threads busy	忙碌线程
9	http-8010 threads max	最大线程数
10	jk-8019 bytes received per second	接收字节数/秒
11	jk-8019 bytes sent per second	发送字节数/秒
12	jk-8019 errors per second	错误数/秒
13	jk-8019 request processing time	请求处理时间
14	jk-8019 requests per second	请求数/秒
15	jk-8019 threads allocated	已分配线程
16	jk-8019 threads busy	忙碌线程
17	jk-8019 threads max	最大线程数
18	Maximum number of active sessions so far	历史最大活动会话数
19	Number of active sessions at this moment	当前活动会话数
20	Number of sessions created by this manager per second	每秒创建会话数
21	Number of sessions we rejected due to maxActive being reached	达到最大会话数后被拒绝的会话数
22	The maximum number of active Sessions allowed, or -1 for no limit	最大允许会话数里, -1时为无限
23	cl Loaded Class Count	已加载类计数
24	cl Total Loaded Class Count	全加载类计数
25	comp Accumulated time spent in compilation	总编译时间
26	gc ConcurrentMarkSweep accumulated time spent in collection	CMS收集累计时间
27	gc Copy accumulated time spent in collection	GC副本收集累计时间
28	gc Copy number of collections per second	每秒GC副本收集数
29	gc ParNew accumulated time spent in collection	ParNew收集累计时间
30	gc ParNew number of collections per second	每秒ParNew收集数
31	mem Heap Memory committed	堆内存
32	mem Heap Memory max	堆内存最大
33	mem Heap Memory used	堆内存已使用
34	mem Non-Heap Memory committed	非堆内存
35	mem Non-Heap Memory max	非堆内存最大
36	mem Non-Heap Memory used	非堆内存已使用
37	mem Object Pending Finalization Count	暂挂结束操作的对象的大约数目
38	mp CMS Old Gen committed	年老代
39	mp CMS Old Gen max	年老代最大
40	mp CMS Old Gen used	年老代已用
41	mp CMS Perm Gen committed	永久代
42	mp CMS Perm Gen max	永久代最大
43	mp CMS Perm Gen used	永久代已用
44	mp Code Cache committed	代码缓存
45	mp Code Cache max	代码缓存最大
46	mp Code Cache used	代码缓存已用
47	mp Perm Gen committed	方法区
48	mp Perm Gen max	方法区最大
49	mp Perm Gen used	方法区已用

11. Oracle 监控

11.1. 安装部署 orabbix

```
mkdir /usr/local/orabbix
```

```
cd /usr/local/orabbix
```

unzip orabbix-1.2.3.zip (资源包里有直接上传服务上)如果 unzip 出现 command not found 请 yum install unzip

```
chmod +x run.sh
```

```
cp init.d/orabbix /etc/init.d/
```

```
sed -i 's#/opt/orabbix#orabbix=/usr/local/orabbix#g'
/etc/init.d/orabbix
```

```
chmod +x /etc/init.d/orabbix
```

```
sed -i 's#java#/usr/lib/jvm/jdk1.8.0_91/bin/java#g'
/usr/local/orabbix/run.sh
```

11.2. 配置

```
cp /usr/local/orabbix/conf/config.props.sample
/usr/local/orabbix/conf/config.props
vi /usr/local/orabbix/conf/config.props
```

注：资源文件提供此文件，直接拷贝


```

#comma separed list of Zabbix servers
ZabbixServerList=ZabbixServer1,ZabbixServer2

ZabbixServer1.Address=192.168.1.227
ZabbixServer1.Port=10051

ZabbixServer2.Address=IP_ADDRESS_OF_ZABBIX_SERVER
ZabbixServer2.Port=PORT_OF_ZABBIX_SERVER

#pidFile
OrabbixDaemon.PidFile=./logs/orabbix.pid
#frequency of item's refresh
OrabbixDaemon.Sleep=300
#MaxThreadNumber should be >= than the number of your databases
OrabbixDaemon.MaxThreadNumber=100

#put here your databases in a comma separated list
DatabaseList=DB1,DB2,DB3

#Configuration of Connection pool
#if not specified Orabbis is going to use default values (hardcoded)
#Maximum number of active connection inside pool
DatabaseList.MaxActive=10
#The maximum number of milliseconds that the pool will wait
#(when there are no available connections) for a connection to be returned
#before throwing an exception, or <= 0 to wait indefinitely.
DatabaseList.MaxWait=100
DatabaseList.MaxIdle=1

#define here your connection string for each database
DB1.Url=jdbc:oracle:thin:@192.168.1.14:1521:ekhip
DB1.User=comm
DB1.Password=comm|
#Those values are optionals if not specified Orabbix is going to use the general values
DB1.MaxActive=10
DB1.MaxWait=100
DB1.MaxIdle=1
DB1.QueryListFile=./conf/query.props

DB2.Url=jdbc:oracle:thin:@server2.domain.example.com:<LISTENER_PORT>:DB2
DB2.User=zabbix
DB2.Password=zabbix_password
DB2.QueryListFile=./conf/query.props

DB3.Url=jdbc:oracle:thin:@server3.domain.example.com:<LISTENER_PORT>:DB3
DB3.User=zabbix
DB3.Password=zabbix_password
DB3.QueryListFile=./conf/query.props

```

DB_QM （DB 名称，可随意定义，但要与下文保持一致，切记要与监控的主机名称保持一致）

11.3. 启动

```
chkconfig --add orabbix
```

```
chkconfig --level 345 orabbix on
```

```
/usr/local/orabbix/run.sh
```

11.4. 导入模版

Orabbix_export_full.xml 全部导入（图表 监控项 触发器）

Orabbix_export_graphs.xml 图表

Orabbix_export_items.xml 监控项

Orabbix_export_triggers.xml 触发器

选中 Orabbix_export_full.xml 直接导入，则可以直接在主机中链接到模版就可以使用全部功能了（主机名称一定要与配置中的 DatabaseList=DB_QM 保持一致）！

12. Nginx 监控

12.1. Nginx 服务配置

在 nginx 的配置文件中，添加 status 配置。

在 service{} 里面

```
location/nginx-status {
    stub_status on;
    access_log off;
    allow 127.0.0.1;
    allow 192.168.1.10; #(zabbix 服务器的 IP 地址，一般是内网地址)
    deny all;
}
```

访问设置好的 nginx-status 链接，如：



nginx Status 详细说明

Active connections: 对后端发起的活动连接数;

server accepts : nginx 总共处理了 N 个连接;

handled: 成功创建了 N 次握手;

requests: 总共处理了 N 请求。

Reading: nginx 读取客户端的 header 数;

Writing: nginx 返回给客户端的 header 数;

Waiting: nginx 请求处理完成, 正在等待下一请求指令的连接。

12.2. 在 Agentd 上编写监控脚本

```
mkdir /usr/local/zabbix/etc/scripts
```

```
cd /usr/local/zabbix/etc/scripts
```

vi nginx_status.sh (把以下代码复制到此脚本里或者直接将资源文件 nginx_status.sh 上传)

```
#!/bin/bash
# Script to fetch nginx statuses for tribily monitoring systems
# Author: guoli
# License: ve
# Set Variables
HOST=192.168.1.14
PORT=80
LOG=/tmp/nginx-status.log
# 检测 nginx 进程是否存在
function active {
```

```

        /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | grep 'Active' | awk
        '{print $NF}'
    }

function reading {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | grep 'Reading' | awk
    '{print $2}'
}

function writing {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | grep 'Writing' | awk
    '{print $4}'
}

function waiting {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | grep 'Waiting' | awk
    '{print $6}'
}

function accepts {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | awk NR==3 | awk '{print
    $1}'
}

function handled {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | awk NR==3 | awk '{print
    $2}'
}

function requests {
    /usr/bin/curl "http://$HOST:$PORT/nginx-status" 2>/dev/null | awk NR==3 | awk '{print
    $3}'
}

# Run the requested function
$1

```

chmod 755 /usr/local/zabbix/etc/scripts/nginx_status.sh (修改权限)

/usr/local/zabbix/etc/scripts/nginx_status.sh active 测试脚本

chown zabbix.zabbix nginx_status.sh

||

```
[root@localhost scripts]# chmod o+x nginx_status.sh
[root@localhost scripts]# chown zabbix.zabbix nginx_status.sh
[root@localhost scripts]# ^C
[root@localhost scripts]# ll
total 4
-rw-r--r-x 1 zabbix zabbix 1155 Jul  8 10:33 nginx_status.sh
[root@localhost scripts]#
```

12.3. 修改 nginx 服务器上的 zabbix 客户端文件

在 zabbix_agentd.conf 加入

修改 zabbix agent 的配置文件

#nginx

UserParameter=nginx.accepts,/usr/local/zabbix/scripts/nginx_status.sh accepts

UserParameter=nginx.handled,/usr/local/zabbix/scripts/nginx_status.sh handled

UserParameter=nginx.requests,/usr/local/zabbix/scripts/nginx_status.sh requests

UserParameter=nginx.connections.active,/usr/local/zabbix/scripts/nginx_status.sh active

UserParameter=nginx.connections.reading,/usr/local/zabbix/scripts/nginx_status.sh reading

UserParameter=nginx.connections.writing,/usr/local/zabbix/scripts/nginx_status.sh writing

UserParameter=nginx.connections.waiting,/usr/local/zabbix/scripts/nginx_status.sh waiting

12.4. 测试 agent 端测试

/usr/local/zabbix/sbin/zabbix_agentd -t nginx.requests

```
[root@localhost fedora]# /usr/local/zabbix/sbin/zabbix_agentd -t nginx.requests
nginx.requests [t[694]
[root@localhost fedora]#
```

service zabbix_agentd restart

12.5. Zabbix get 测试

.在 zabbix server 端进行 zabbix_get 测试,取到数据了,说明没问题。

```
/usr/local/zabbix/bin/zabbix_get -s 192.168.1.227 -p 10050 -k 'nginx.connections.active'  
/usr/local/zabbix/bin/zabbix_get -s 192.168.1.227 -p 10050 -k "nginx.connections.waiting"  
/usr/local/zabbix/bin/zabbix_get -s 192.168.1.227 -p 10050 -k "nginx.connections.writing"  
/usr/local/zabbix/bin/zabbix_get -s 192.168.1.227 -p 10050 -k "nginx.accepts"  
/usr/local/zabbix/bin/zabbix_get -s 192.168.1.227 -p 10050 -k "nginx.requests"
```

12.6. 导入模板

zabbix 中 nginx status 的模板,把模板导入 zabbix 服务器。

注: 资源文件提供 Template_nginx.xml

13. 常见问题

13.1. ZBX_TCP_READ() failed

get value from agent failed: ZBX_TCP_READ() failed;[104]
connection reset by pee

解决方案:

第一步、查看了一下 zabbix_server 进程启动了, agent 端的 zabbix_agentd 也已经启动了/

第二步: 查看 zabbix_agentd.win.conf 端配置文件, serverIP 是否正确

第三步: 查看 sever 和 agent 防火墙, 是否禁止链接 10050 端口
Telnt ip 10050

1. selinux 是否关闭。

查看 selinux 的状态

```
[root@localhost ~]#
[root@localhost ~]# getenforce
Enforcing
[root@localhost ~]#
```

```
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# getenforce
Enforcing
[root@localhost ~]# man 8 setenforce
setenforce(8)                                SELinux Command Line docu

NAME
    setenforce - modify the mode SELinux is running in

SYNOPSIS
    setenforce [Enforcing|Permissive|1|0]

DESCRIPTION
    Use Enforcing or 1 to put SELinux in enforcing mode.
    Use Permissive or 0 to put SELinux in permissive mode.

    If SELinux is disabled and you want to enable it, or SELinux is enabled and you

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SEE ALSO
```

修改文件内容：

```
[root@localhost ~]#
[root@localhost ~]# vi /etc/sysconfig/selinux
```

```
#    permissive - SELinux prints warnings instead of enforcing.
#    disabled - No SELinux policy is loaded.
#SELINUX=disabled
# SELINUXTYPE= can take one of three two values:
#    targeted - Targeted processes are protected,
#    minimum - Modification of targeted policy. Only selected processes are protected.
#    mls - Multi Level Security protection.
#SELINUXTYPE=targeted
SELINUX=disabled
```

2. zabbix web 目录下面 `$ZBX_SERVER` 是否为 ip, 如果是 localhost, ping 下 localhost 是否能解析。

```
$DBI['TYPE'] = 'MYSQL';
$DBI['SERVER'] = '127.0.0.1';
$DBI['PORT'] = '3306';
$DBI['DATABASE'] = 'zabbix';
$DBI['USER'] = 'zabbix';
$DBI['PASSWORD'] = '12345';

// Schema name. Used for IBM DB2 and PostgreSQL.
$DBI['SCHEMA'] = '';

$ZBX_SERVER = 'localhost';
$ZBX_SERVER_PORT = '10051';
$ZBX_SERVER_NAME = 'zabbix';

$IMAGE_FORMAT_DEFAULT = IMAGE_FORMAT_PNG;

...

"/var/www/html/zabbix/conf/zabbix.conf.php" 19L, 423C written
[root@localhost ~]#
[root@localhost ~]# /etc/init.d/zabbix_server restart
Restarting zabbix_server (via systemctl):
[root@localhost ~]#
```

3. 查看 php 的 `fsockopen` 模块是否启用

```
max_file_uploads = 20
:
: Fopen wrappers :
:
: Whether to allow the treatment of URLs (like http:// or ftp://)
: http://php.net/allow-url-fopen
allow_url_fopen = On
:
: Whether to allow include/require to open URLs (like http:// or f
: http://php.net/allow-url-include
allow_url_include = Off
:
: Define the anonymous ftp password (your email address). PHP's de
: for this is empty.
: http://php.net/from
:from="john@doe.com"
:
: Define the User-Agent string. PHP's default setting for this is
: http://php.net/user-agent
:user_agent="PHP"
:
: Default timeout for socket based streams (seconds)
: http://php.net/default-socket-timeout
default_socket_timeout = 60
:
: If your scripts have to deal with files from Macintosh systems,
: or you are running on a Mac and need to deal with files from
: unix or win32 systems, setting this flag will cause PHP to
: automatically detect the EOL character in those files so that
: fgets() and file() will work regardless of the source of the fil
: http://php.net/auto-detect-line-endings
:auto_detect_line_endings = Off
:
: Dynamic Extensions :
:
: If you wish to have an extension loaded automatically, use the f
: syntax
extension=php_openssl.dll
:
: For example, on Windows:
:
:wq
```

13.2. 测试服务器和客户机是否通信

在监控服务器上使用命令测试服务器与客户机主机是否正常通信，（客户机上需要放行 TCP 10050 端口）如：

```
zabbix_get -s 客户端 ip -p10050 -k "system.hostname"
```

14. 常见命

```
systemctl restart httpd.service #重启 apache
```

```
systemctl restart mariadb.service #重启 MariaDB
```

```
systemctl restart httpd.service #重启 apache
```

```
/etc/init.d/zabbix_server restart
```

```
/etc/init.d/zabbix_agentd start
```

```
ps -eaf|grep zabbix 查看启动后台进程
```

```
netstat -tnlp|grep -E '3306|1005' 查看端口
```