1 数据库创建

1 Database creation

概述

Overview

Zabbxi数据库必须在Zabbix server或proxy安装的时候创建 A Zabbix database must be created during the installation of Zabbix server or proxy.

本节提供有关创建Zabbix数据库的说明。 每个受支持的数据库都有对应的创建命令 This section provides instructions for creating a Zabbix database. A separate set of instructions is available for each supported database.

`schema.sql`, `images.sql` and `data.sql` 这些文件在Zabbix的子目录 *database* 下. 如果Zabbix是通过分发包安装的，参考分发包相关文档.
对于Zabbix proxy 数据库，**只需要**导入 `schema.sql`（不需要导入 images.sql 和 data.sql）
`schema.sql`, `images.sql` and `data.sql` files are located in the *database* subdirectory of Zabbix sources. If Zabbix was installed from distribution packages, refer to the distribution documentation. For a Zabbix proxy database, **only** `schema.sql` should be imported (no images.sql nor data.sql)

MySQL

```
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;
```

如果使用Zabbix程序包按照手册 Debian/Ubuntu 或 RHEL/CentOS 导入数据到数据库。

If you use Zabbix packages continue with instructions for Debian/Ubuntu or RHEL/CentOS to import the data into the database.

```
shell> cd database/mysql
shell> mysql -uzabbix -p<password> zabbix < schema.sql
# 下面步骤当创建Zabbix proxy数据库时不需要执行
shell> mysql -uzabbix -p<password> zabbix < images.sql
shell> mysql -uzabbix -p<password> zabbix < data.sql
```

PostgreSQL

需要使用有权限的用户去创建数据库对象。 以下shell命令将创建zabbix用户。在提示下请输入密码并再次确认密码。（注意，可能首先要求输入sudo命令对应的用户密码 ）：

You need to have database user with permissions to create database objects. The following shell

command will create user `zabbix`. Specify password when prompted and repeat password (note, you may first be asked for `sudo` password):

```
shell> sudo -u postgres createuser --pwprompt zabbix
```

现在将以先前创建的用户作为数据库所有者（参数：`-O zabbix`）设置数据库`zabbix`（最后一个参数）并导入initial schema和数据（假设当前目录位于Zabbix sources的根目录中）：

Now we will set up the database `zabbix` (last parameter) with the previously created user as the owner (`-O zabbix`) and import initial schema and data (assuming you are in the root directory of Zabbix sources):

```
shell> sudo -u postgres createdb -O zabbix zabbix
```

如果使用Zabbix程序包按照手册 Debian/Ubuntu 或 RHEL/CentOS导入数据到数据库。

If you use Zabbix packages continue with instructions for Debian/Ubuntu or RHEL/CentOS to import the data into the database.

```
shell> cd database/postgresql
shell> cat schema.sql | sudo -u zabbix psql zabbix
# 下面步骤当创建Zabbix proxy数据库时不需要执行
shell> cat images.sql | sudo -u zabbix psql zabbix
shell> cat data.sql | sudo -u zabbix psql zabbix
```

上面的命令仅作为例子提供参考，它可以在大多数GNU / Linux安装中使用。 可以使用不同的命令，例如“psql -U <username>“，这取决于系统/数据库的配置方式。如果在设置数据库时遇到麻烦，请咨询数据库管理员。

The above commands are provided as an example that will work in most of GNU/Linux installations. You can use different commands, e. g. "psql -U <username>" depending on how your system/database are configured. If you have troubles setting up the database please consult your Database administrator.

Oracle

假设在Oracle服务器host上存在有权限创建数据库对象的用户（用户名为zabbix，密码为password),并且该用户具有/tmp目录的写入权限，Zabbix数据库需要使用UTF8字符集。检查当前设置：

We assume that a *zabbix* database user with *password* password exists and has permissions to create database objects in ORCL service located on the *host* Oracle database server with a *user* shell user having write access to /tmp directory. Zabbix requires a Unicode database character set and a UTF8 national character set. Check current settings:

```
sqlplus> select parameter,value from v$nls_parameters where
parameter='NLS_CHARACTERSET' or parameter='NLS_NCHAR_CHARACTERSET';
```

需要将Zabbix数据库安装介质拷贝到Oracle服务器上的*/tmp/zabbix_images*目录下：

If you are creating a database for Zabbix server you need to have images from Zabbix sources on the host where Oracle is running. Copy them to a directory */tmp/zabbix_images* on the Oracle host:

```
shell> cd /path/to/zabbix-sources
shell> ssh user@oracle_host "mkdir /tmp/zabbix_images"
shell> scp -r misc/images/png_modern user@oracle_host:/tmp/zabbix_images/
```

现在开始创建数据库 Now prepare the database:

```
shell> cd /path/to/zabbix-sources/database/oracle
shell> sqlplus zabbix/password@oracle_host/ORCL
sqlplus> @schema.sql
# 下面步骤当创建Zabbix proxy数据库时不需要执行
sqlplus> @images.sql
sqlplus> @data.sql
```

然后删掉介质存放的临时目录 Now the temporary directory can be removed:

```
shell> ssh user@oracle_host "rm -rf /tmp/zabbix_images"
```

IBM DB2

```
shell> db2 "create database zabbix using codeset utf-8 territory us pagesize
32768"
shell> cd database/ibm_db2
shell> db2batch -d zabbix -f schema.sql
# 下面步骤当创建Zabbix proxy数据库时不需要执行
shell> db2batch -d zabbix -f images.sql
shell> db2batch -d zabbix -f data.sql
```

Zabbix server,Zabbix proxy,Zabbix web server必须将字符集设置为UTF-8 否则，来自Zabbix的文本信息将被IBM DB2服务器解析为非UTF-8字符集，并在Zabbix与数据库之间互相转换。数据库将存储有问题的非ASCII字符。
It is important to set UTF-8 locale for Zabbix server, Zabbix proxy and the web server running Zabbix frontend. Otherwise text information from Zabbix will be interpreted by IBM DB2 server as non-UTF-8 and will be additionally converted on the way from Zabbix to the database and back. The database will store corrupted non-ASCII characters.

Zabbix前端使用了SQL中的OFFSET 和 LIMIT语句。为了SQL正常工作 IBM DB2服务器必须设置环境变量DB2_COMPATIBILITY_VECTOR的值为3。在数据库启动之前执行下面的命令：

Zabbix frontend uses OFFSET and LIMIT clauses in SQL queries. For this to work, IBM DB2 server must have DB2_COMPATIBILITY_VECTOR variable be set to 3. Run the following command before starting the database server:

```
shell> db2set DB2_COMPATIBILITY_VECTOR=3
```

SQLite

只有为**Zabbix proxy** 创建数据库的时候才能使用SQLite

Using SQLite is supported for **Zabbix proxy** only!

如果使用SQLite作为Zabbix proxy的数据库，创建时如果数据库不存在，将自动创建。
If using SQLite with Zabbix proxy, database will be automatically created if it does not exist.

```
shell> cd database/sqlite3
shell> sqlite3 /var/lib/sqlite/zabbix.db < schema.sql
```

返回 安装部分，Return to the installation section.