Master and Servants

Help Zabbix handle remote proxy network
QUADRATA

→ IT company with long experience in supporting small/medium enterprise

→ Proud to accomplish tasks using exclusively Open-Source software

→ Been using Zabbix since 2004, version 1.0

→ Main partners: HP, IBM and EMC
The Case:

Manage multiple geo-spread proxies
The Infrastructure

Brazil: remote proxies
- FURTHEST remote proxies:
  - Betim, Minas Gerais
  - Goiana, Pernambuco

Italy: server + remote proxies
- Remote proxies:
  - Verrone, Lombardy
  - Melfi, Basilicata
The Infrastructure: Initial Setup

**SERVER**

- **Server**
  - Virtual, Centos 6, 4GB Ram
  - Zabbix 2.2.8

- **Database**
  - Physical, Centos 6, 8GB Ram
  - DBMS Percona Server 5.6.32

- **Frontend**
  - Apache 2.2

**PROXIES**

- **Proxy + Database**
  - Virtual, Centos 6, 4GB Ram
  - Zabbix 2.2.8
  - MySQL 5.6.30
  - Default DB configuration
The Problems

- Huge Queue
- Busy Sender Processes
Could only be a matter of NETWORK LATENCY?
TIME SYNCHRONIZATION

This thread gave us a precious tip about installing NTP on all infrastructure machines, in order to synchronize times between SERVER and PROXIES.

We decided to optimize proxies disk operations with two changes:

- Switch from MySQL to Percona Server, a more performance enhanced engine
- Reconfigure DB to a file-per-table setup, useful in environments with not-too-fast or shared storage
We needed to optimize proxies active connections in which they sent data:

- **DataSenderFrequency** just above the max time needed by senders to complete their batch
- **ProxyOfflineBuffer** at minimum, to avoid data overloading in sending queue
The final touch

Multiple Timezones

Zabbix frontend replicated, adapting web-server configuration for each one with the right user timezone

```apache
<IfModule mod_alias.c>
    Alias /zabbix-la /var/www/html/zabbix-la
</IfModule>

<Directory "/var/www/html/zabbix-la”>
    Options FollowSymLinks
    AllowOverride None
    Order allow,deny
    Allow from all

    php_value max_execution_time 300
    php_value memory_limit 128M
    php_value post_max_size 16M
    php_value upload_max_filesize 2M
    php_value max_input_time 300
    php_value date.timezone America/Montevideo
</Directory>
```
The final touch

Migration to 3.0

New Zabbix version brings performance improvement on server-proxy “handshake”

https://www.zabbix.com/documentation/3.0/manual/introduction/whatsnew300#performance_improvements1
The final touch

Migration to 3.2 (future)

Upcoming version will (maybe) bring remote commands on proxies
Questions?

THANKS FOR WATCHING!

info@quadrata.it - www.quadrata.it