



# Master and Servants

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Help Zabbix handle remote proxy  
network





# QUADRATA

- IT company with long experience in supporting small/med **Enterprise**
  - Proud to accomplish tasks using *exclusively* **Open-Source** software
  - Been using **Zabbix** since 2004, version 1.0
  - Main partners: **HP, IBM** and **EMC**
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*The Case:*

**Manage multiple  
geo-spread proxies**

# The Infrastructure

**Brazil: remote proxies**

FURTHEST remote proxies:

Betim, Minas Gerais  
Goiana, Pernambuco

**Italy: server + remote proxies**

Zabbix server in Turin, Piedmont. Server and DB on separated nodes.

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

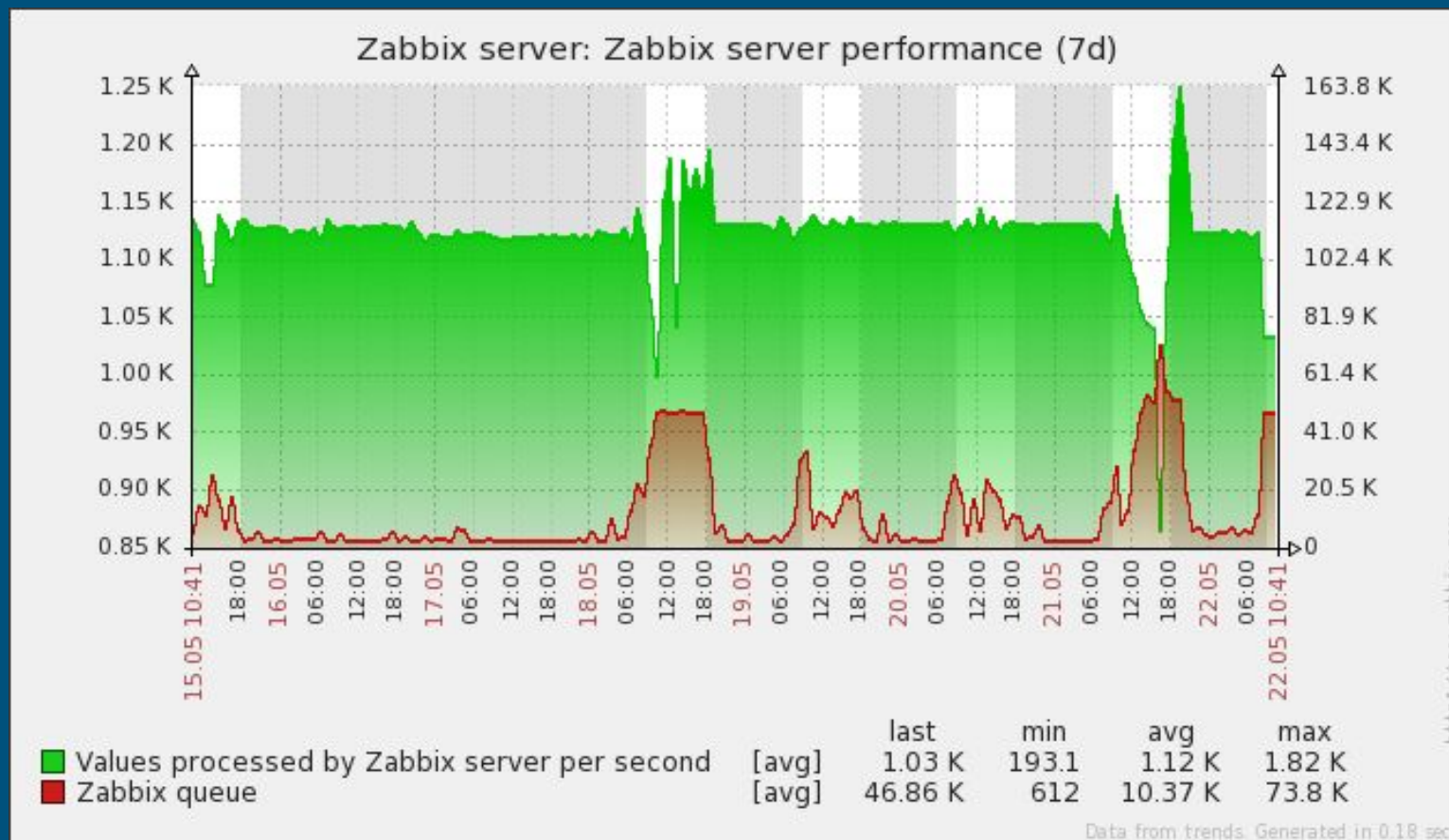
## PROXIES

### ★ *Proxy + Database*

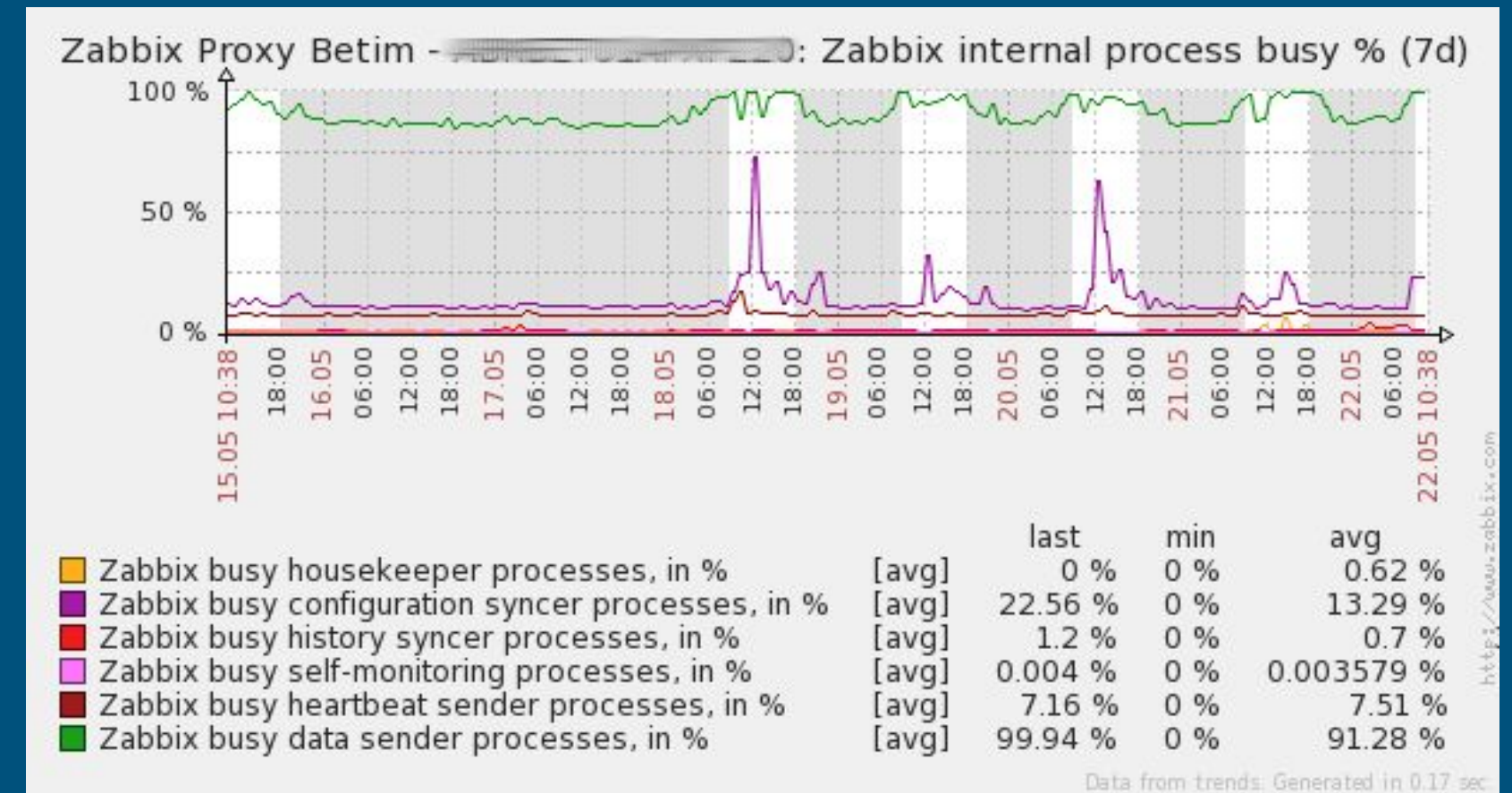
- Virtual, Centos 6, 4GB Ram
- Zabbix 2.2.8
- MySQL 5.6.30
- Default DB configuration



# The Problems



Huge Queue



Busy Sender Processes

*Could only be a matter of*  
**NETWORK LATENCY ?**

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<https://www.zabbix.com/forum/showthread.php?t=43522>

# 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**



# PROXIES DATABASE I/O

**Percona Server**  
+  
**innodb\_file\_per\_table**

*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**

# SENDER PROCESSES

**DataSenderFrequency**  
+  
**ProxyOfflineBuffer**

*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
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# The final touch

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## Multiple Timezones

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

```
<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

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## *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](https://www.zabbix.com/documentation/3.0/manual/introduction/whatsnew300#performance_improvements1)

# The final touch

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## *Migration to 3.2 (future)*

Upcoming version will (maybe) bring remote commands on proxies

# Questions?

THANKS FOR WATCHING !

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