

# « LA SUPERVISION »

Réunion CAPITOUL



# Shinken™



**INSA** | INSTITUT NATIONAL  
DES SCIENCES  
APPLIQUÉES  
TOULOUSE

Ludovic Bosseaux  
Ludovic Pouzenc  
Frédéric Soulier



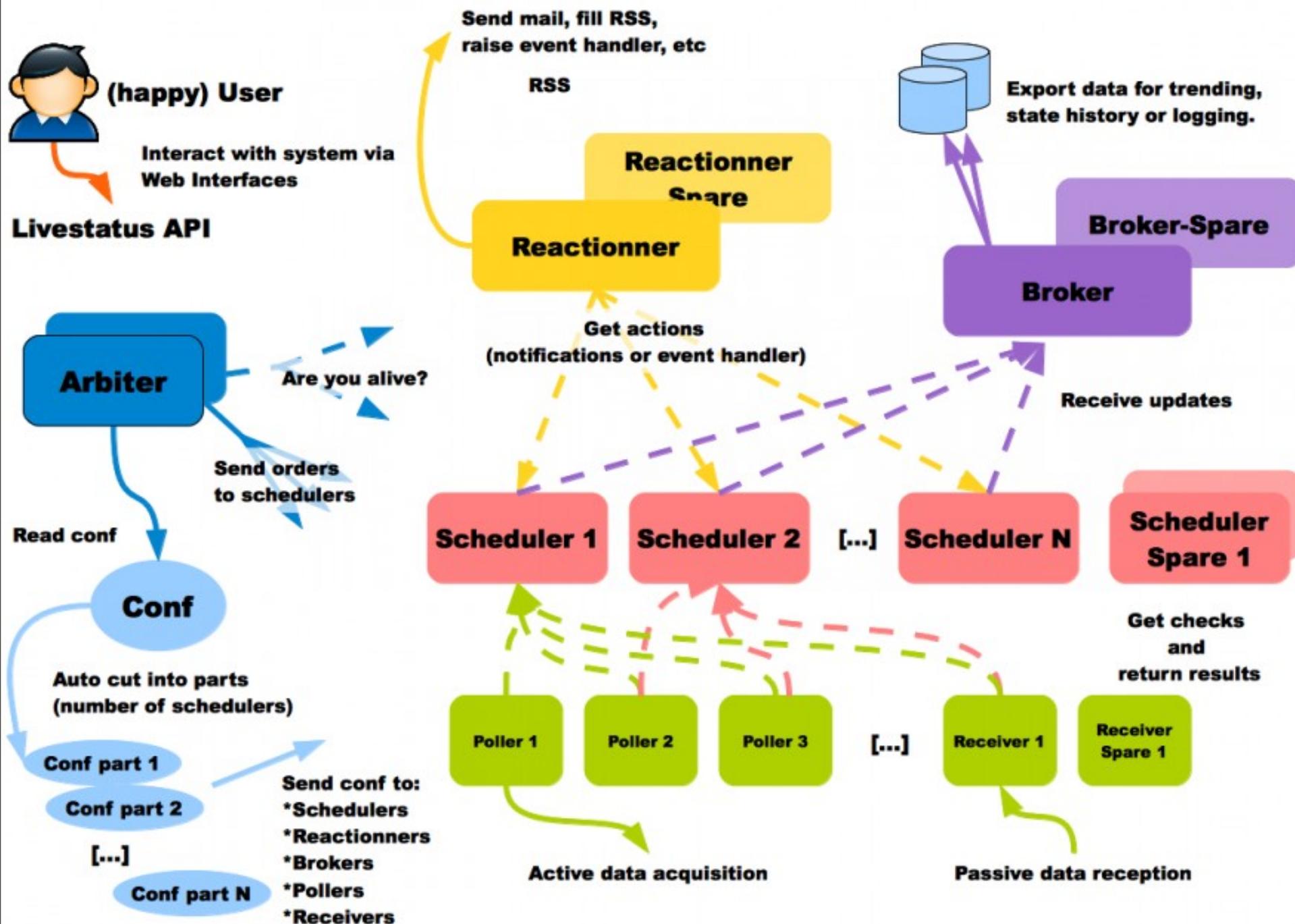
# Contexte

- Bref historique
  - Nagios et ses pb de « scalabilité »
  - Ré-implémentation en python
- Caractéristiques
  - Syntaxe config = celle de Nagios
  - Boîte à outils
  - Modularité du cœur
  - Scalabilité, design « horizontal »
  - `shinken install switch`

# Fonctionnalités

- Base : idem Nagios Core (mais modulaire)
- Packs « natifs »
  - Notion d'impact (criticité)
  - Business Process
  - WebUI
    - Dashboard
    - Visualisation perfdats...
  - LiveStatus
  - Snapshots
  - Découverte automatique
- Packs « contributions »
  - VMWare (migration aware)
  - check\_nwc\_health (SNMP)
- 129 packs actuellement
  - [www.shinken.io](http://www.shinken.io)

# Architecture



# Une boîte à outils

- Solution adaptative :
  - Interfaces Web :
    - Multisite, Thruk, Webui
  - Systèmes de stockage de métriques :
    - RRDTool, Influxdb, Graphite
  - Interconnexion avec d'autres outils :
    - GLPI, etc

# WebUI en images Dashboard

Shinken ▾ Dashboard Impacts IT problems All Wall System ▾

## Shinken Daemons

**Scheduler**

Name	State	Alive	Attempts	Last Check	Realm
scheduler-master	✓	True	0/3	22s	All

**Poller**

Name	State	Alive	Attempts	Last Check	Realm
poller-master	✓	True	0/3	21s	All

**Broker**

Name	State	Alive	Attempts	Last Check	Realm
broker-master	✓	True	0/3	21s	All

**Reactionner**

Name	State	Alive	Attempts	Last Check	Realm
reactionner-master	✓	True	0/3	22s	All

**Receiver**

Name	State	Alive	Attempts	Last Check	Realm
receiver-master	✓	True	0/3	20s	All

### Information

**Arbiter:** The arbiter daemon reads the configuration, divides it into schedulers = N parts), and distributes them to the appropriate poller and reactionner daemons respectively.

**Scheduler:** The scheduler daemon manages the dispatching of checks to the poller and reactionner daemons respectively.

**Poller:** The poller daemon launches check plugins as requested. When the check is finished it returns the result to the scheduler.

**Reactionner:** The reactionner daemon issues notifications and event\_handlers.

**Broker:** The broker daemon exports and manages data from the poller. The broker uses modules exclusively to get the job done.

**Receiver (optional):** The receiver daemon receives passive checks as a distributed command buffer.

[Learn more »](#)

# WebUI en images

## Intégration des métriques

Shinken Dashboard Impacts IT problems All Wall System Search Hi Fsoulier

### OK: csn-esx-3/Net

Host: csn-esx-3  
Members of: No groups  
Notes: (none)

**Service Information:**

Status: **OK**  
Flapping: **NO**  
In Scheduled Downtime?: **NO**

*CHECK\_ESX3.PL OK - net receive=636.00 KBps, send=2661.00 KBps, all 4 NICs are connected (truncated) [see all]*

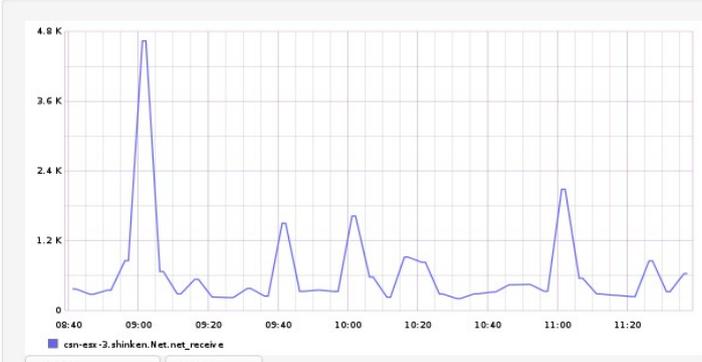
Last Check: was 2m 53s ago  
Last State Change: Tue Apr 28 19:51:05 2015  
Current Attempt: 1/3 (HARD state)  
Next Active Check: in 2m 5s

Service Information:  
Additional Informations:  
Commands:  
Gesture:

Services Comments Downtimes **Graphs** Impact graph

#### Graphs

4 hours 1 day 1 week 1 month 1 year



Time	Receive (KBps)
08:40	0.2
08:50	0.3
09:00	4.7
09:10	0.5
09:20	0.4
09:30	0.3
09:40	1.5
09:50	0.4
10:00	1.7
10:10	0.5
10:20	0.8
10:30	0.4
10:40	0.5
10:50	0.4
11:00	2.2
11:10	0.4
11:20	0.8

+ Show more Zoom

# WebUI en images

## Définition de services métiers

Shinken

```
define service{
    use generic-service
    host_name virtuel
    service_description mail-sortant
    check_command !op_rule!( ( mailer,SMTP & mailer,DNSCACHE ) | ( mailer2,SMTP & mailer2,DNSCACHE ) )
    business_rule_output_template Down services: $(<a href='http://webui.url/service/$HOSTNAME$/$SERVICED
```

+ Add filters

Services Comments Downtimes Graphs Impact graph

Active  
filters

Name: mail.\*

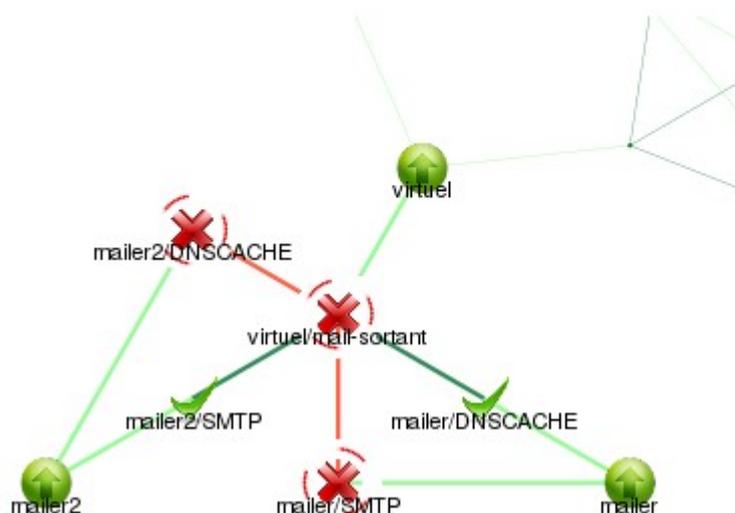
Save this search

No bookmarks

No common  
bookmarks

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**CRITICAL: virtuel/mail-sortant**



Socket timeout after 10 seconds

Socket timeout after 10 seconds

Socket loss = 0%, RTA = 1.15 ms

106 second response time on port 143

103 second response time on port 25

Socket loss = 0%, RTA = 0.62 ms

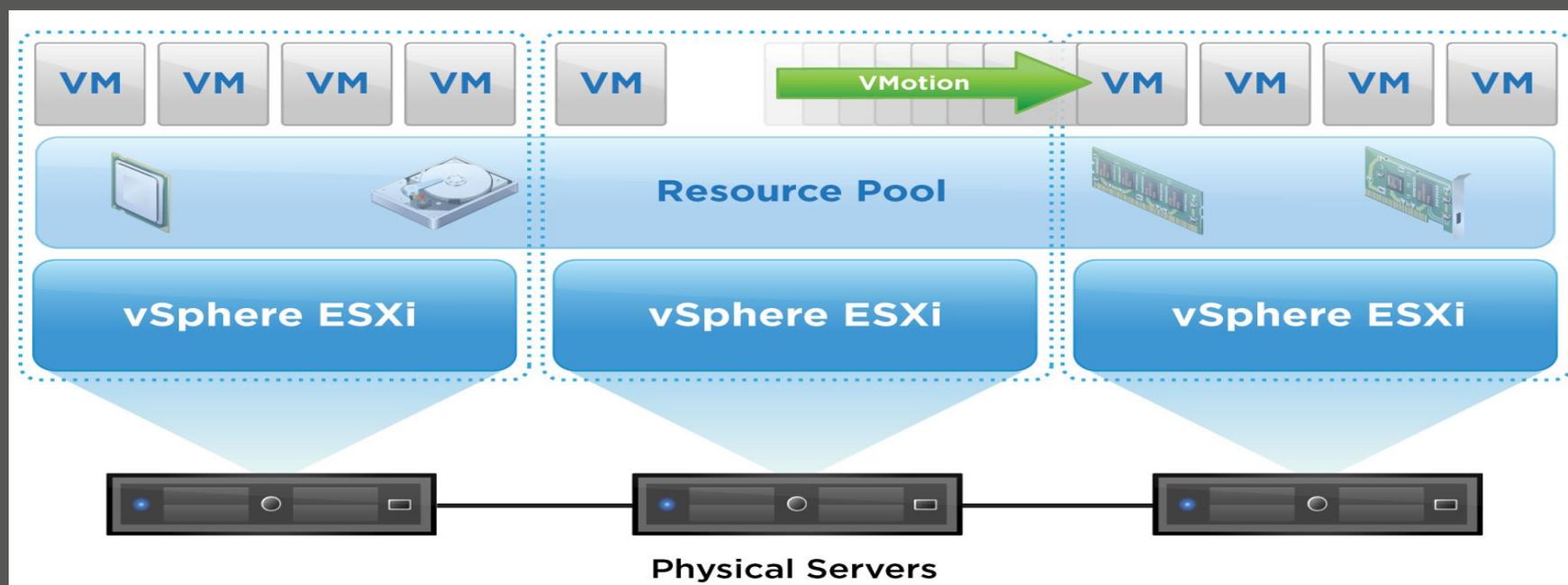
101 second response time on port 53

Socket loss = 0%, RTA = 1.25 ms

107 second response time on port 25

# Exemples d'usages Environnements virtuels

- Problématiques spécifiques :
  - Multiplication des machines à monitorer.
  - Evolution dynamique des dépendances.



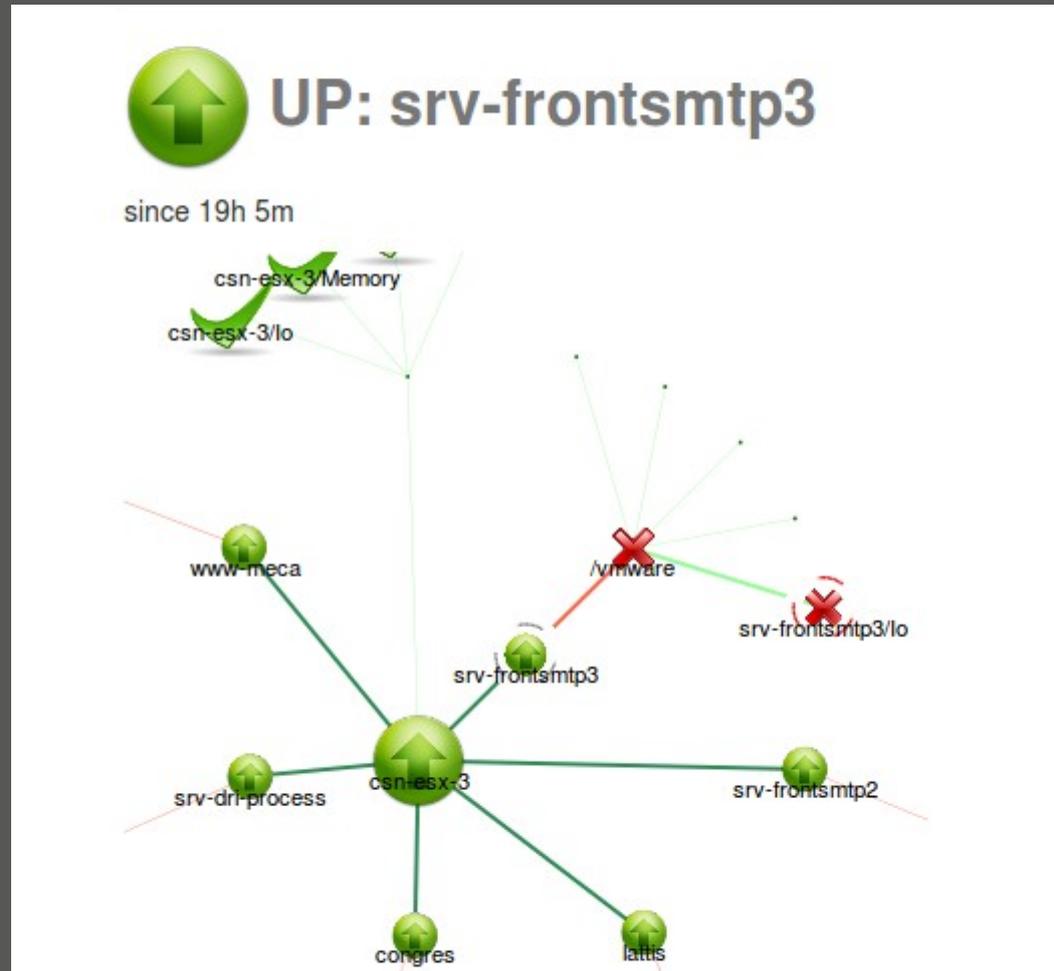
# Exemples d'usages Environnements virtuels

- 3 outils dans shinken :
  - Pack VMWARE.
  - Gestion de la découverte automatique.
  - Module hot-dependencies.

```
root@srv-shinken:~# jq . /tmp/vmware_mapping_file.json
[
  [
    [
      "host",
      "csn-esx-1"
    ],
    [
      "host",
      "insatlse "
    ]
  ],
  [
    [
      "host",
      "csn-esx-1"
    ],
    [
      "host",
      "frontsmtp3 "
    ]
  ],
]
```

# Exemples d'usages Environnements virtuels

- Visualisation :



# Conclusion

- Aspects positifs
  - Modularité, API entrée et sortie de données.
  - Foison de packs de contributeurs dynamiques.
- Aspects négatifs
  - Ecosystème « instable »
    - Disparition de certains packs
    - Manque de lisibilité sur le long-terme

# Questions et Réponses