

How we learned to stop worrying and love Zabbix

Nagios->Zabbix migration

Some background info on
our monitoring ecosystem

How we evolved:

5 companies, < 100 hardware items

Various tools (FPinger, scripts)

30 companies, 10 engineers, =<1000 hardware items

Linux/Windows/Solaris/*BSD/Cisco/.../...

Nagios (NCSA/NRPE/NagiosGraph/NagVis) and **MOM**

100+ companies, 20+ engineers, >=5000 hardware items

Linux/Windows/Solaris/*BSD/Cisco/VoIP/Security

Centreon

Why Centreon?

- ACL
- Distributed monitoring
- Nagios backend and plugins
- Not so ugly
- Web configuration

Things to monitor

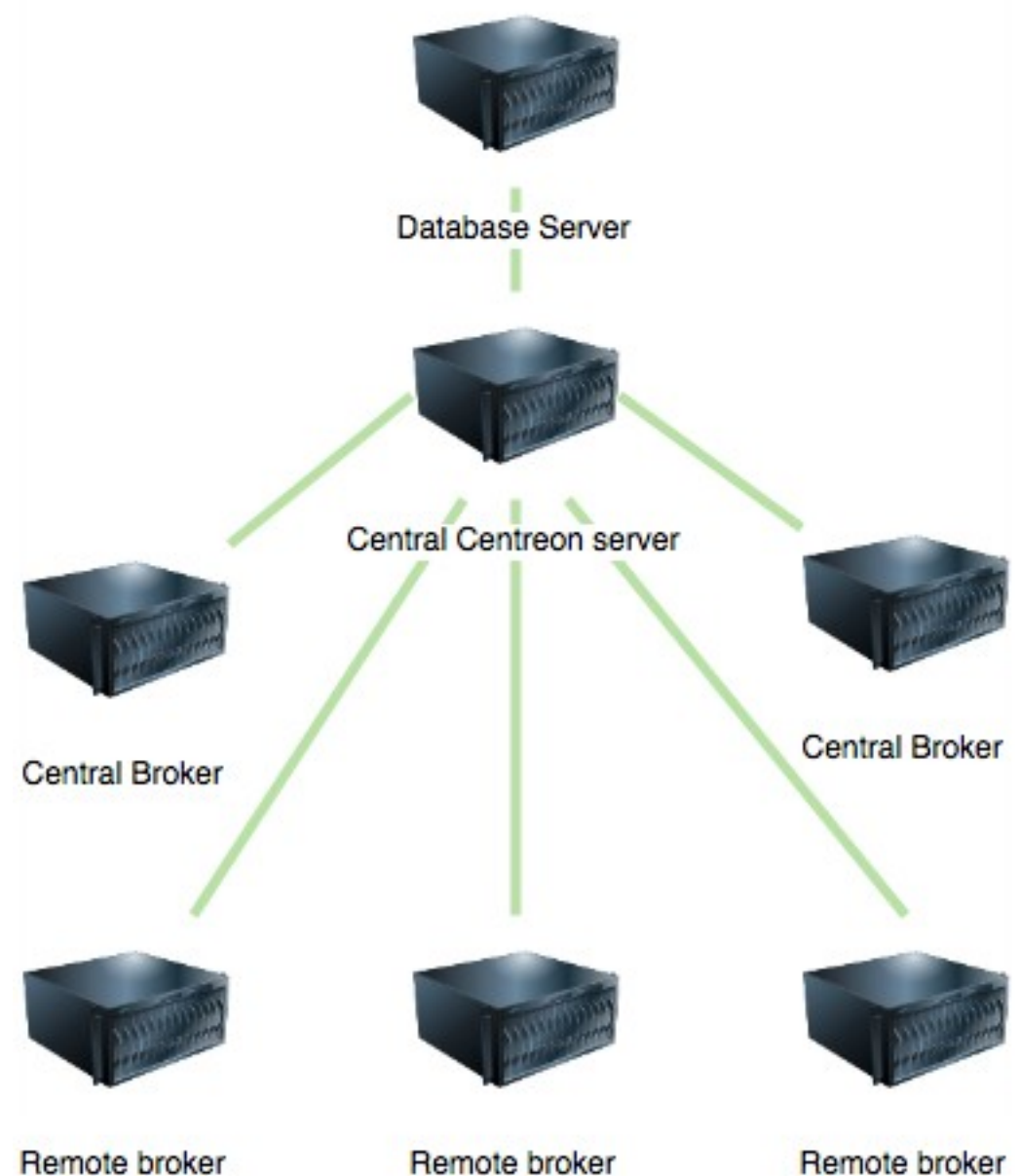
- *nix and Windows (50-100+ sensors per host)
- VoIP infrastructure(H/W, S/W, trunks and calls)
- Databases and applications
- Network equipment (interfaces, connectivity etc)
- Supplementary systems (cameras, temperature sensors, UPSes etc.)

How it worked

Monitoring automation



Server infrastructure

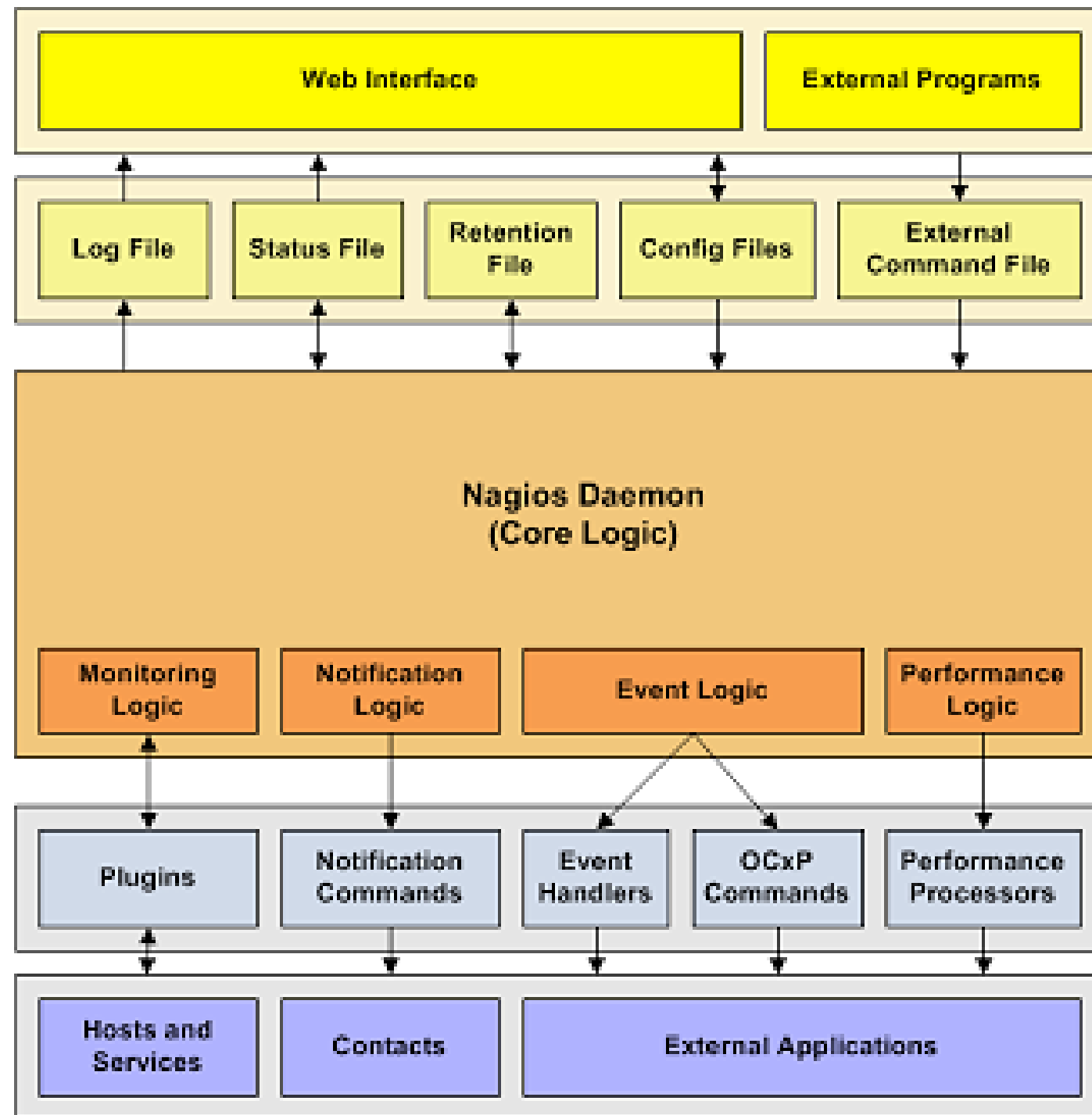


Problems

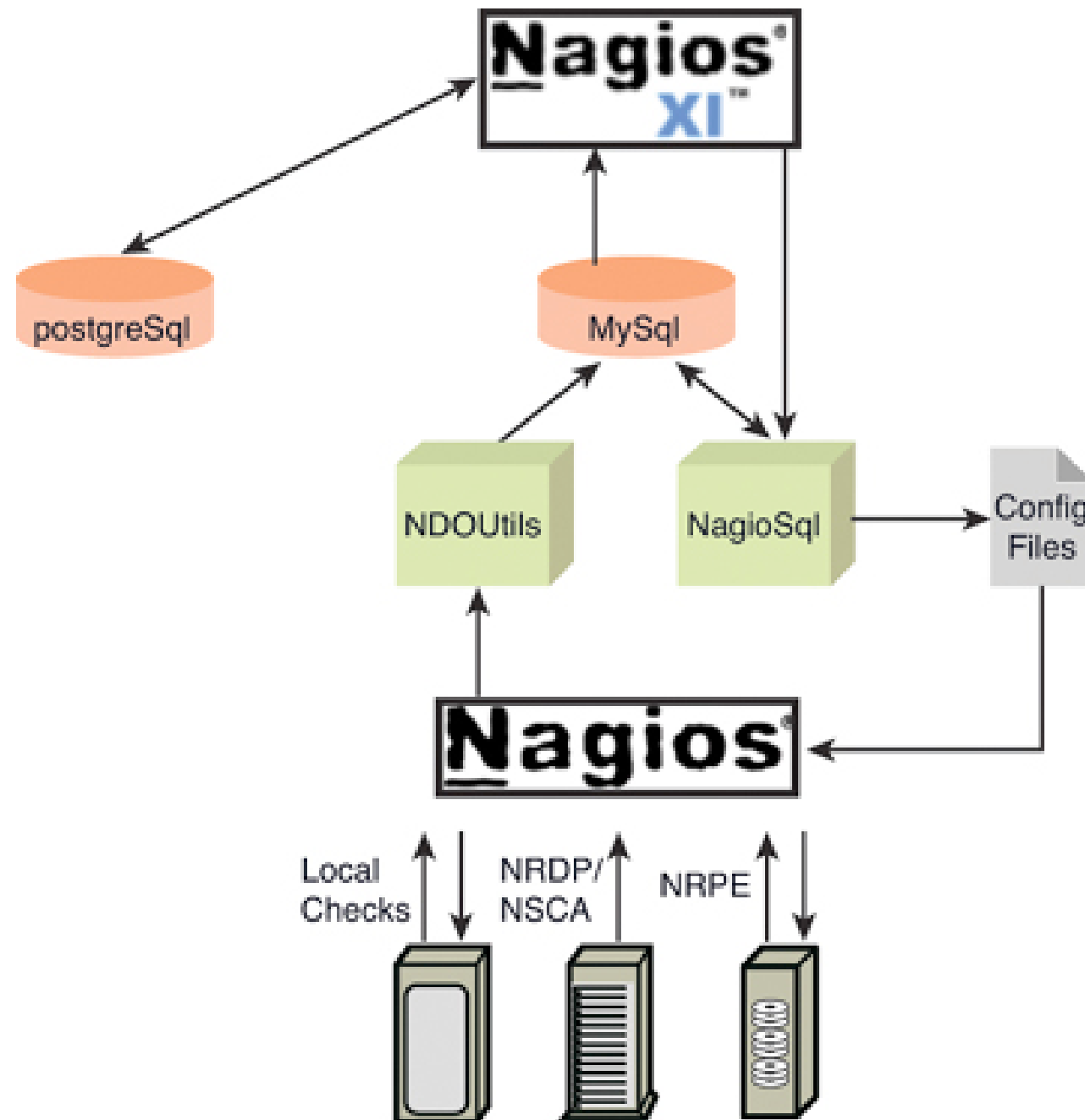
- Management
- Not enough information and features
- Performance problems
 - NCSA/NRDP limitations
 - need to use a lot of active checks
 - script performance
- Basic agents (NRPE/NCPA)
- WMI check performance
- Nagios.cfg limitations
- Broker management issues (SSH+scripts)
- Not enough SLA
- Too many different services to integrate together (brokers, processors, scripts, etc)

Monitoring management problems

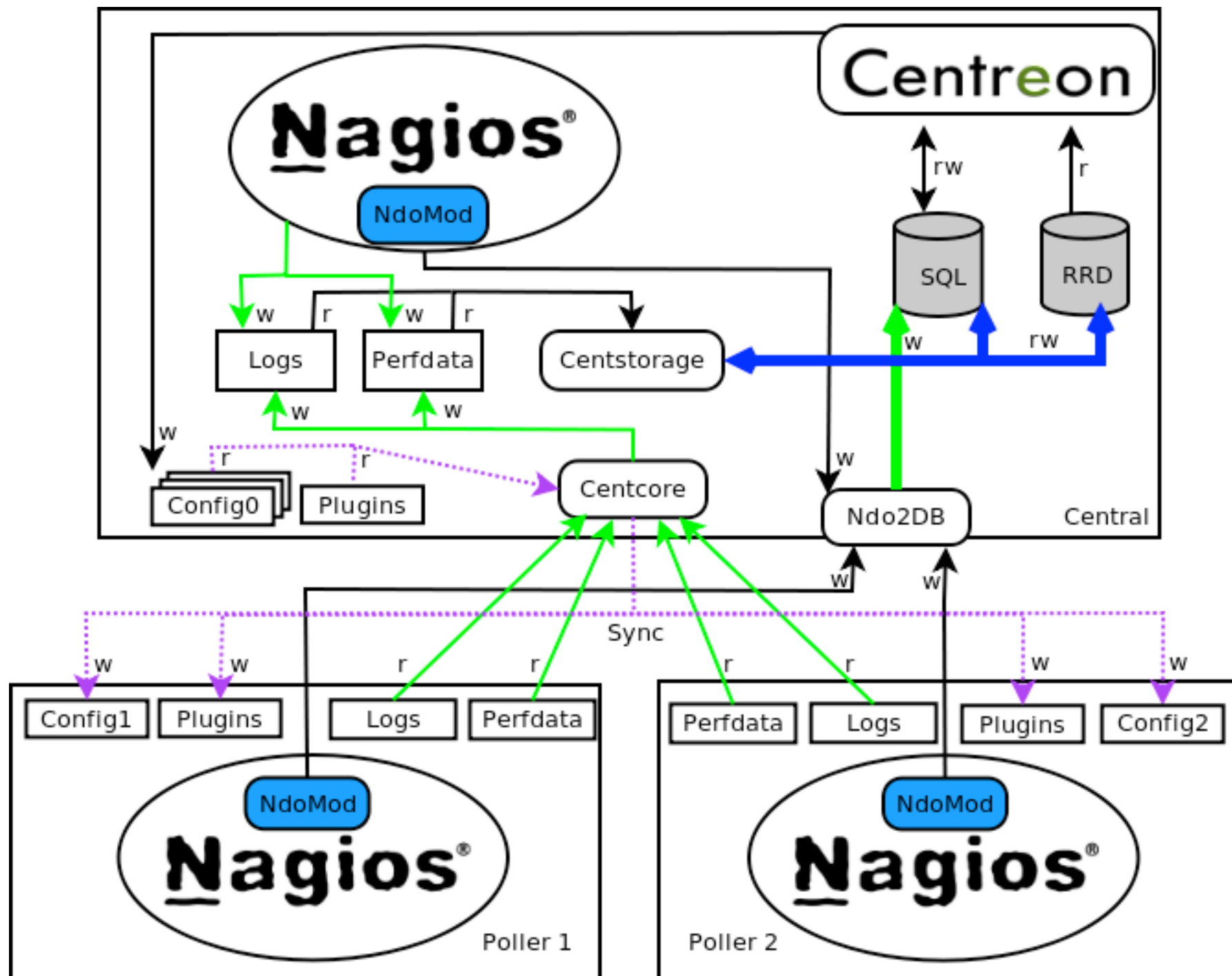
Plain nagios architecture

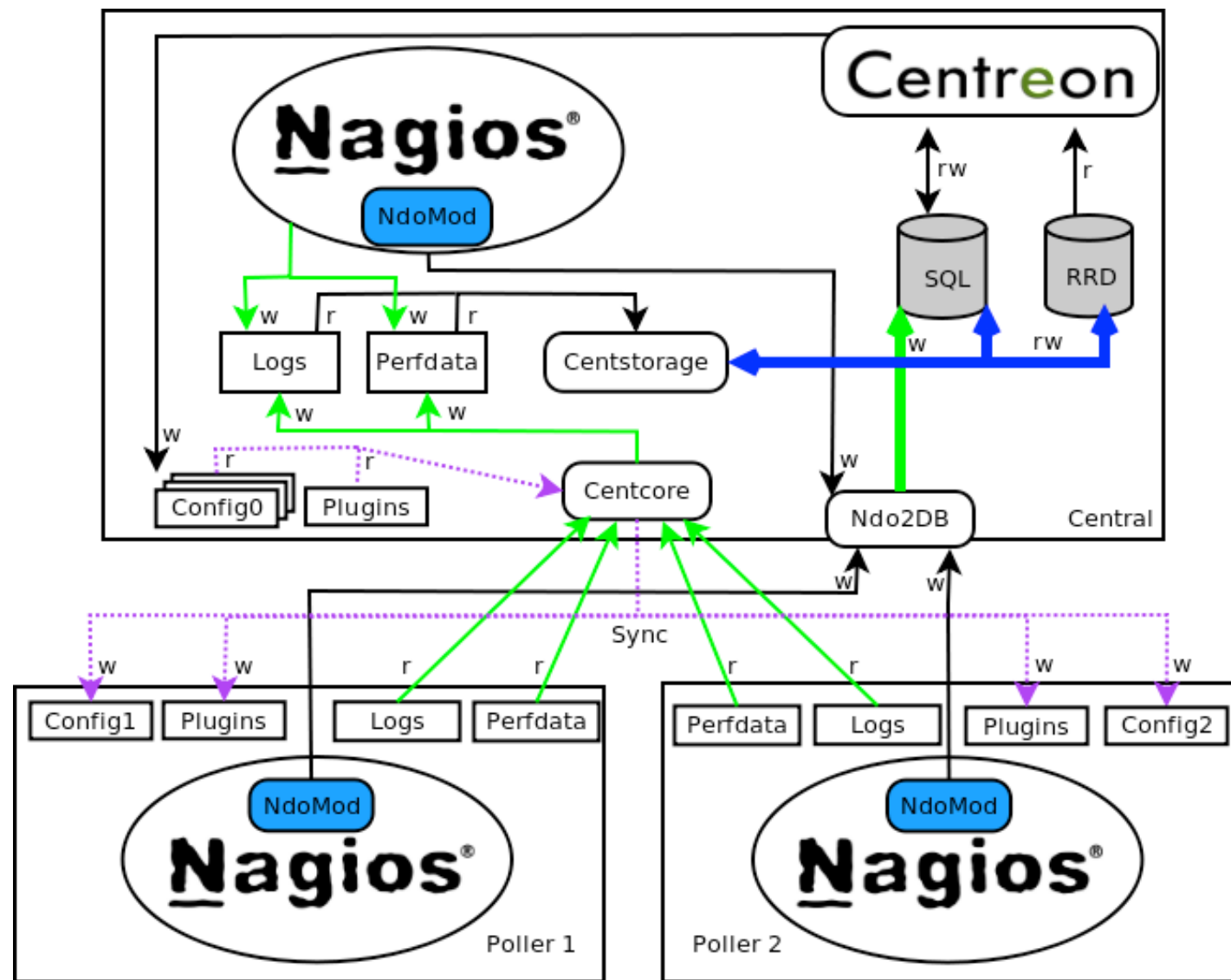


Extended nagios architecture (Nagios XI)

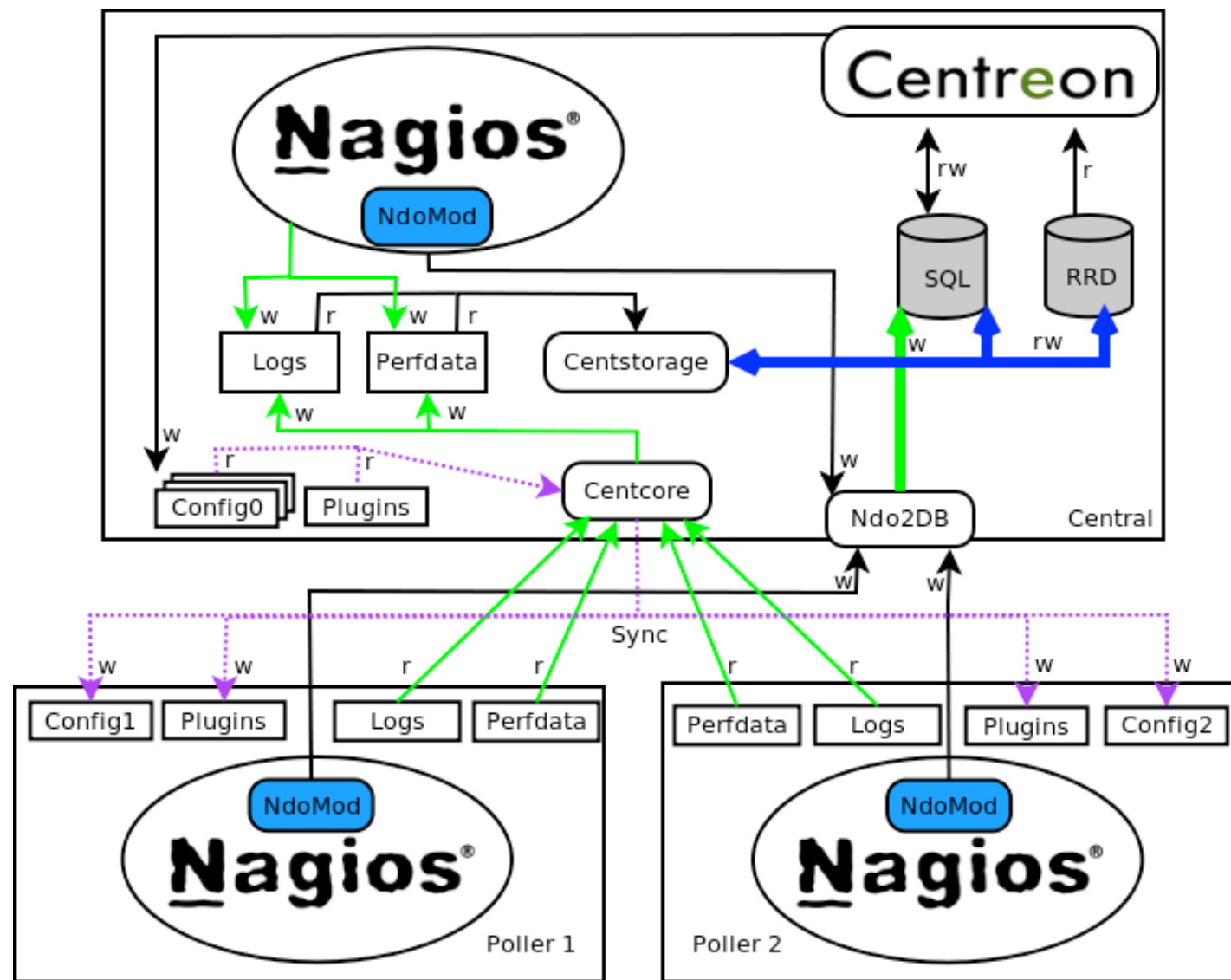


My case (Centreon)





- +CLAPI
- +Nagvis
- +Puppet
- +home-made scripts
- +hacks
- +many more



Synchronization issues

Performance data shipping issues

Any configuration change => config rebuild + engine reload

Data is distributed across different files and databases

Interaction is based on sockets, files and scripts

Automation problems in action

Object : NC-SRV1 User : Object Type : All Search

10 11 12 13 14 15 16 17 18 19 20

Rows 30 Page 15/451

Time	Modification type	Type	Object	Author
01/02/2016 07:16:06	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 07:08:07	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 06:46:06	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 06:38:08	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 06:16:07	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
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01/02/2016 05:08:09	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 04:46:10	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 04:38:07	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
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01/02/2016 03:08:08	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 02:46:05	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
01/02/2016 02:38:08	Changed	host	NC-SRV1	CLAPI_automation_user (clapi_admin)
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Agents and checks

Nagios doesn't decide if check result is ok or not. Script does

check_nrpe_cpu			
<input type="checkbox"/>	check_nrpe_cpu	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_cpu -...	Check
<input type="checkbox"/>	check_nrpe_cpu_proc	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_cpu_p...	Check
check_nrpe_disk			
<input type="checkbox"/>	check_nrpe_disk	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_disk ...	Check
<input type="checkbox"/>	check_nrpe_diskio	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_diski...	Check
<input type="checkbox"/>	check_nrpe_load	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_load ...	Check
<input type="checkbox"/>	check_nrpe_nginx_status	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_nginx...	Check
<input type="checkbox"/>	check_nrpe_phys_mem	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_mem -...	Check
<input type="checkbox"/>	check_nrpe_process	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_proc_...	Check
<input type="checkbox"/>	check_nrpe_uptime	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_uptim...	Check
<input type="checkbox"/>	check_nrpe_users	\$USER1\$/check_nrpe -H \$HOSTADDRESS\$ -c check_users...	Check
<input type="checkbox"/>	check_nt_cpu	\$USER1\$/check_nt -H \$HOSTADDRESS\$ -v CPULOAD -s "p...	Check
<input type="checkbox"/>	check_nt_disk	\$USER1\$/check_nt -H \$HOSTADDRESS\$ -v USEDDISKSPACE...	Check
<input type="checkbox"/>	check_nt_memuse	\$USER1\$/check_nt -H \$HOSTADDRESS\$ -v MEMUSE -s "pu...	Check

Nagios doesn't decide if check result is ok or not.
Script does.

Nothing is built in

Only scripts

No proper authentication

No decent agents

History is tracked in per-check files

Performance

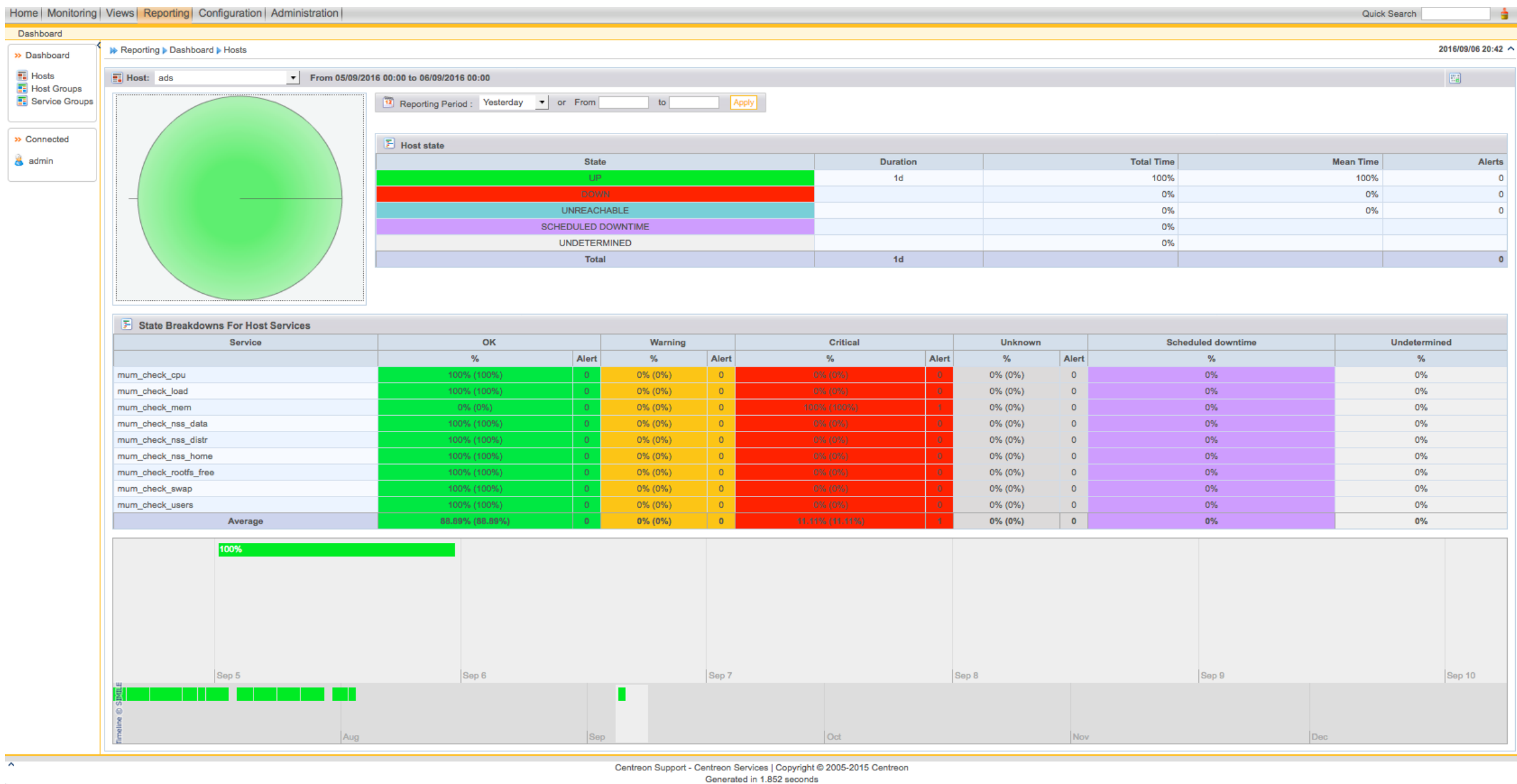
Exit codes

Interpreted languages (Perl, Python, bash, whatever..)

NOT ENOUGH SLA

CRITICAL
WARNING
OK
FLAPPING

UI



UI

We decided to give
Zabbix a try

We decided to give Zabbix a try

ZABBIX

Username

Password

☒ Remember me for 30 days

Sign in

or [sign in as guest](#)

[Help](#) • [Support](#)

Less than a day to setup

Less than a day to setup
a distributed installation

Less than a week to
setup most of the
sensors

It took less than two months to
deploy it on 90% of the monitored
infrastructures

- 1218 servers
- 519 network devices
- over 100k items

Migration process

Deploy: puppet + SQL-scripts
Checks: google and github

Built-in wmi.get!

TLS authentication!

Built-in inventory!

Built-in LLD!

JSON-API!

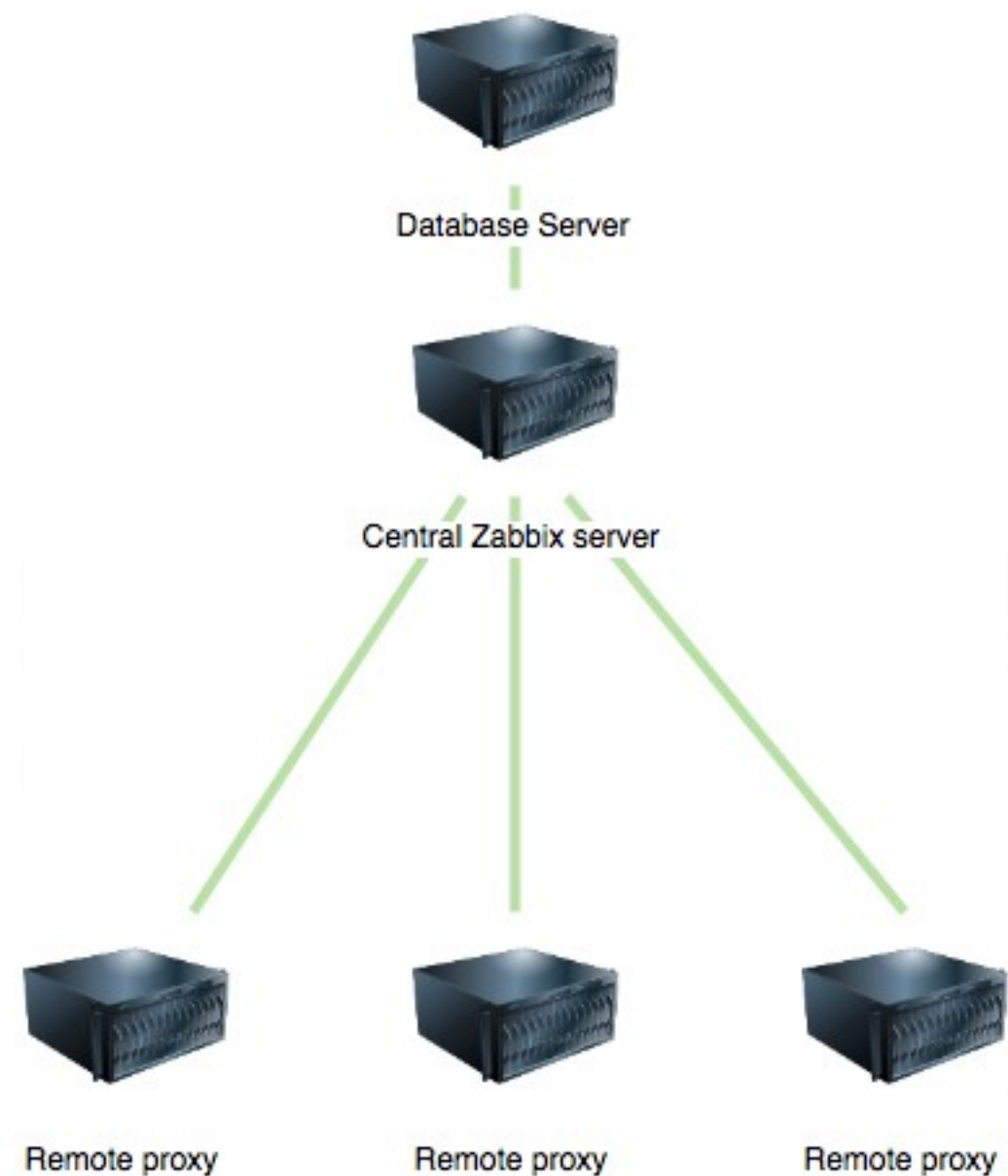
Lot more

How it works now

Monitoring automation



Server infrastructure



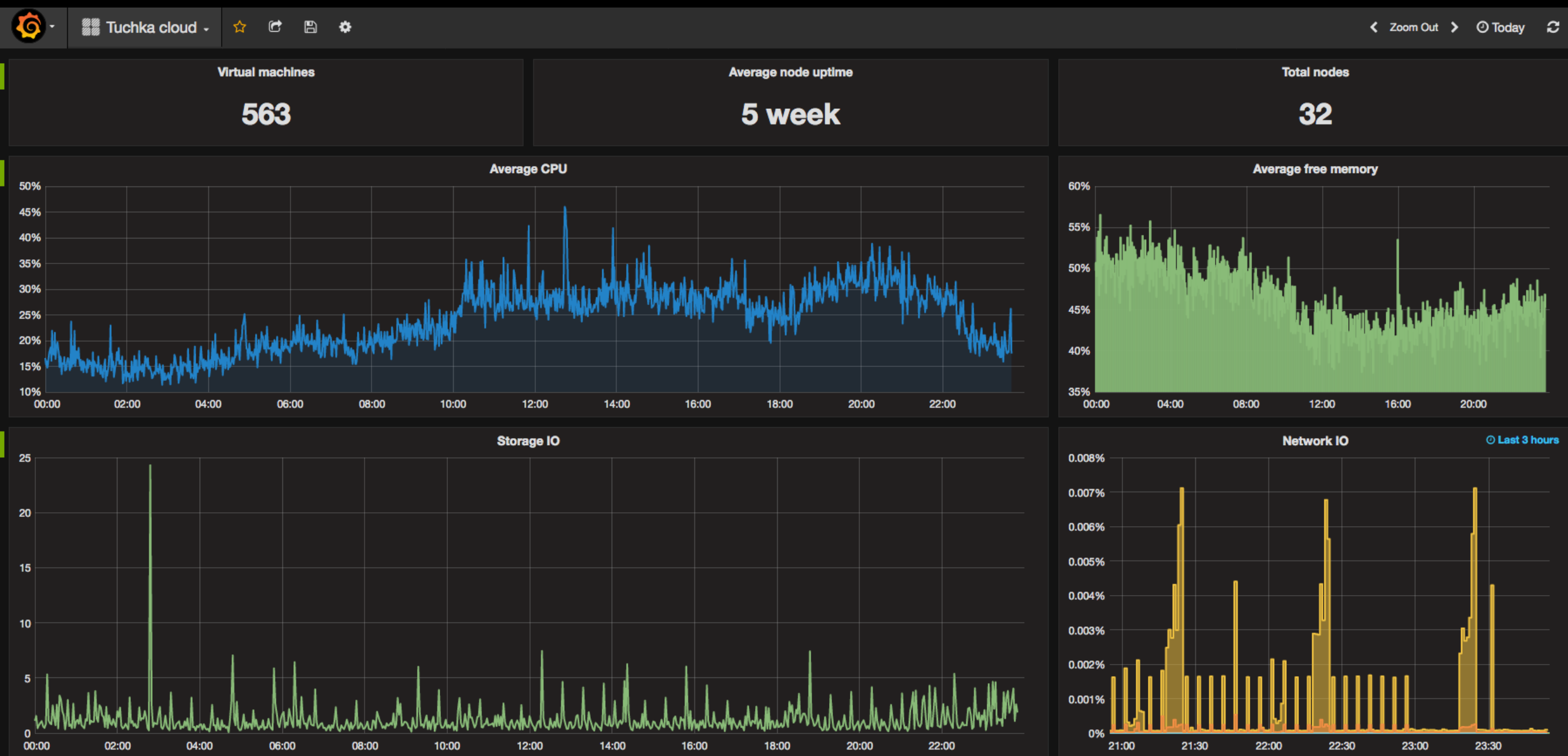
Comparison



What we like

- No more hassle adding new hosts
- Much more information
- Finally decent reports
- Better performance
- 3 times less resources required

Zabbix is friendly)



Questions?