

# openway

## be fast. be smart. be unique.

#1 digital payment software platform provider

Operational Monitoring / Konstantin Ryadov

2018

Prepaid, Debit, Credit, Fuel Card Issuing

Convenisation / Switch & E-Commerce Gateway

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## **Isolated enterprise:**

- Many OS: AIX POWER, SPARC Solaris, Windows / Linux x86\_64
- Domain specific objects (Services, Transactions, Tasks)

**Operational Unix-way terminal monitoring  
(cookbook)**

**Operational UI monitoring: real-time dashboards**

**Integrated Management Console**

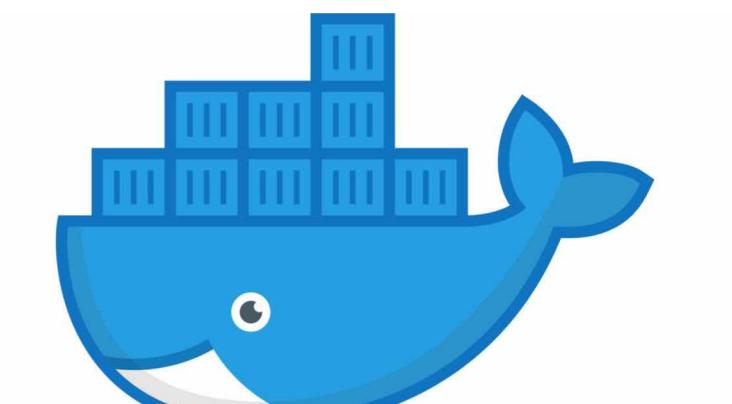
**what do you need?**

- **System:**
    - Availability
    - Performance
    - Errors
    - ...
  - **Business:**
    - Authorization TPS
    - Risk Management
    - Specific Codes
    - ...



# Operational monitoring

- **AIX Power**
  - LPAR/WPAR
- **Linux x86**
  - VM / Containers
- **Solaris x86/SPARC**
  - LDOM / Zones
- **Windows x86**
  - Hyper-V



# Many HW/OS Environment

- **AWS VPC**
  - EC2 / ...
- **GCP VPC**
  - Compute Engine / App Engine
- **RedHat**
  - Openstack / Openshift
- **Microsoft Private Cloud**
  - Azure



# Private Cloud Environment

- **AWS VPC**
  - EC2 / ... - [Amazon CloudWatch](#)
- **GCP VPC**
  - Compute Engine / App Engine - [VPC Flow Logs](#)
- **RedHat**
  - Openstack / Openshift - [Operations/Monitoring](#)
- **Microsoft Private Cloud**
  - Azure - [Azure Monitor](#)

## Monitoring Categories:

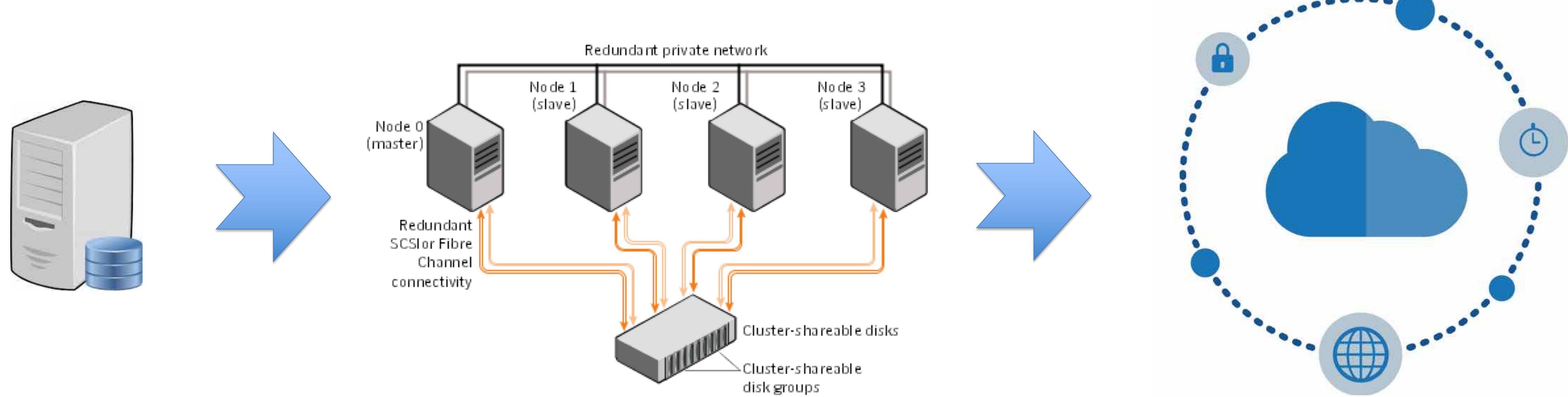
1. Traditional service monitoring
2. Tenant health monitoring
3. Expose this monitoring to tenants
4. Provide monitoring as a service for tenants

# Private Cloud Environment

- 1. Many various resources**
- 2. Real-time is needed**
- 3. Many clients (not one project)**
- 4. Centralized?**
- 5. Part of management system?**
- 6. No admin access?**
- 7. Little time to make decision?**

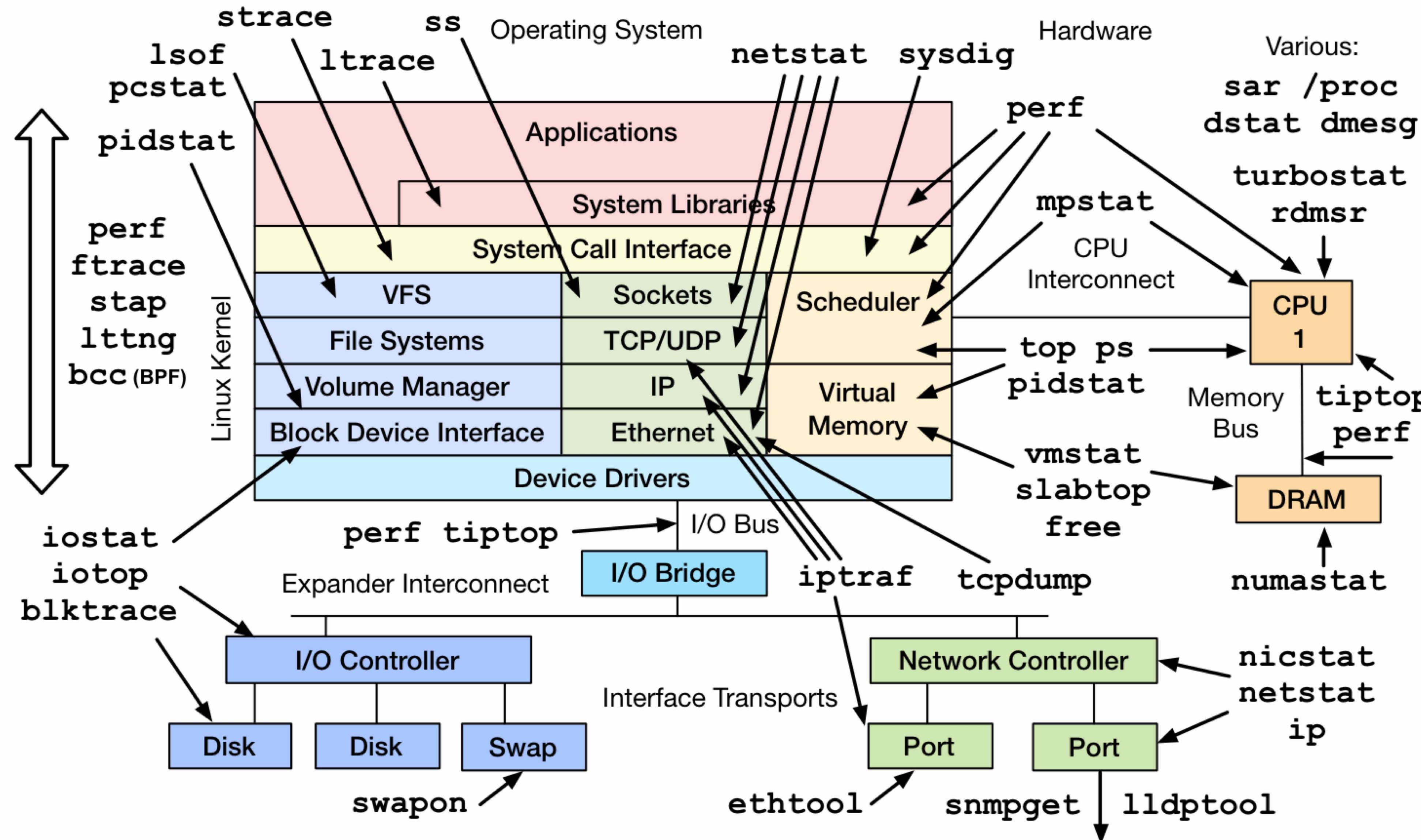
**No silver bullet**





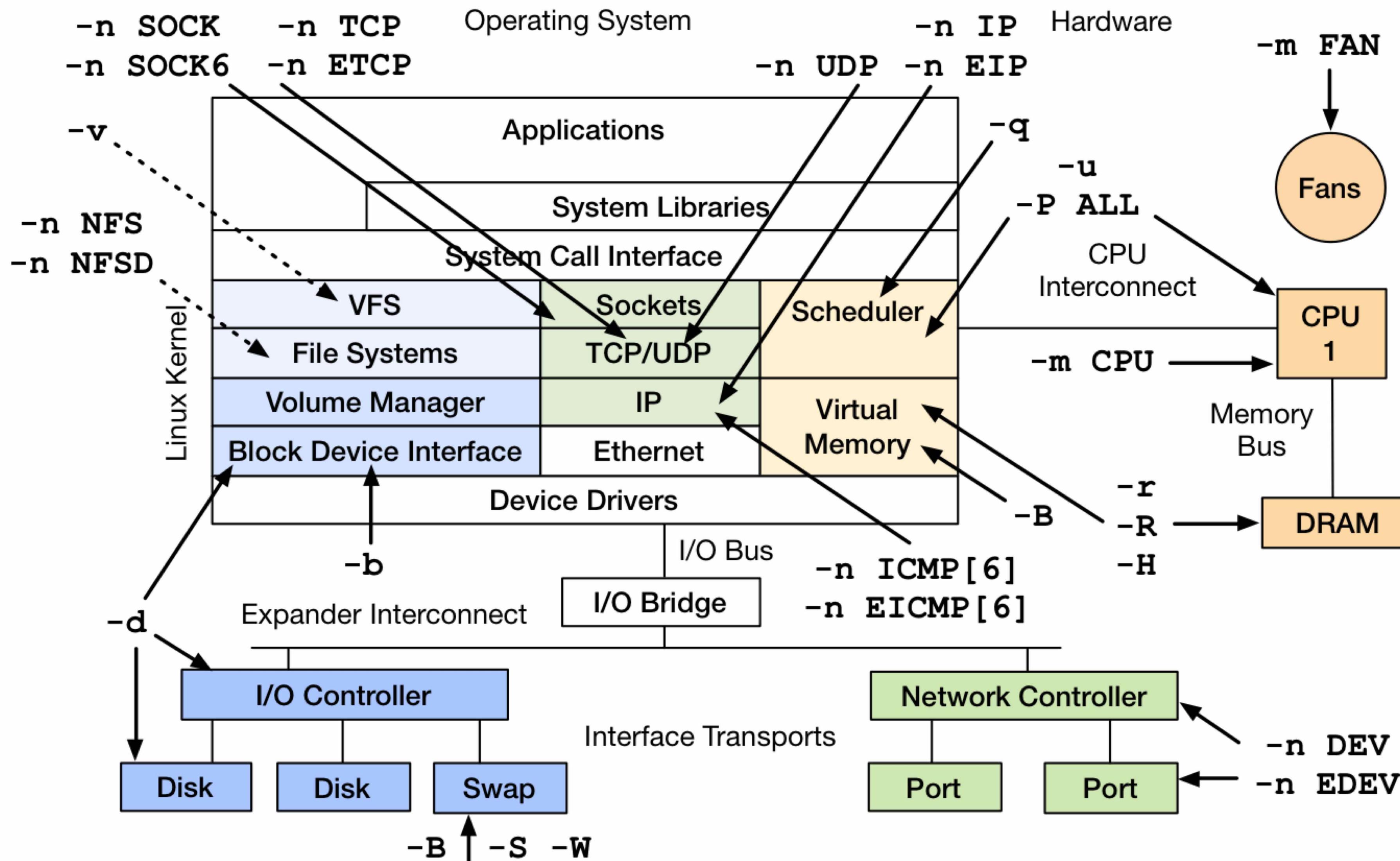
# What is available by default?

# Linux Performance Observability Tools



# Linux

# Linux Performance Observability: sar



# LInuX

```
[root@jds-4 etc]# adduser -M -s `which top` monitor
```

```
[root@jds-4 etc]# cat /etc/passwd |grep monitor
```

```
monitor:x:1006:1006::/home/monitor:/usr/bin/top
```

```
-top - 13:47:58 up 77 days, 17:56, 2 users, load average: 0.05, 0.05, 0.05
Tasks: 268 total, 1 running, 267 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.1 us, 0.1 sy, 0.0 ni, 99.8 id, 0.1 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 32770348 total, 11890480 free, 5184572 used, 15695296 buff/cache
KiB Swap: 16515068 total, 16515068 free, 0 used. 25795348 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
21312	way4	20	0	8099132	451204	19992	S	1.0	1.4	2:44.63	/home/way4/appserver/app
24958	way4	20	0	10.254g	0.978g	17320	S	0.7	3.1	10:52.58	/home/way4/appserver/app
10	root	20	0	0	0	0	S	0.3	0.0	123:13.63	[rcu_sched]
540	root	20	0	0	0	0	S	0.3	0.0	134:29.23	[xfsaild/dm-0]
7381	root	20	0	1566588	19608	4624	S	0.3	0.1	66:19.13	/usr/bin/docker-containe
17583	root	20	0	0	0	0	S	0.3	0.0	0:10.23	[kworker/u48:0]
21227	root	20	0	0	0	0	S	0.3	0.0	0:00.05	[kworker/5:2]
21814	monitor	20	0	54260	2312	1488	R	0.3	0.0	0:00.45	-top
24910	way4	20	0	9423740	882600	15444	S	0.3	2.7	47:34.43	/home/way4/appserver/app
1	root	20	0	51720	3880	2384	S	0.0	0.0	18:19.97	/usr/lib/systemd/systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:04.38	[kthreadd]
3	root	20	0	0	0	0	S	0.0	0.0	0:38.26	[ksoftirqd/0]
5	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	[kworker/0:0H]
8	root	rt	0	0	0	0	S	0.0	0.0	0:00.35	[migration/0]
9	root	20	0	0	0	0	S	0.0	0.0	0:00.01	[rcu_bh]
11	root	rt	0	0	0	0	S	0.0	0.0	0:18.96	[watchdog/0]

Linux  
top

[docker stats \[OPTIONS\]](#) - Display a live stream of container(s) resource usage statistics

CONTAINER	CPU %	MEM USAGE/LIMIT	MEM %	NET I/O
archive	0.01%	15.75 MiB/7.798 GiB	0.20%	24.08 MiB/23.65 MiB
broadcast	0.15%	180.6 MiB/7.798 GiB	2.26%	49.12 MiB/41.32 MiB
consul	7.57%	22.75 MiB/7.798 GiB	0.28%	0 B/0 B
github-webhooks	0.00%	6.508 MiB/7.798 GiB	0.08%	28.56 MiB/25.7 MiB
grafana	0.01%	15.73 MiB/7.798 GiB	0.20%	9.858 MiB/42.69 MiB
influxdb	0.05%	54.32 MiB/7.798 GiB	0.68%	25.86 MiB/402.6 MiB
master-binaries	0.00%	8.93 MiB/7.798 GiB	0.11%	287.1 MiB/940.5 MiB
master-docs	0.01%	28.16 MiB/7.798 GiB	0.35%	1.047 GiB/5.885 MiB
mysql-drone	0.16%	450.3 MiB/7.798 GiB	5.64%	30.73 MiB/114.4 MiB
nginx	0.01%	26.04 MiB/7.798 GiB	0.33%	0 B/0 B
nsqadmin	0.00%	12.18 MiB/7.798 GiB	0.15%	24.7 MiB/198 MiB
nsqd1	0.72%	12.33 MiB/7.798 GiB	0.15%	38.2 MiB/106.4 MiB
nsqllookupd1	0.08%	10.9 MiB/7.798 GiB	0.14%	34.93 MiB/34.84 MiB
octostats	0.00%	1.02 MiB/7.798 GiB	0.01%	4.786 KiB/4.239 KiB
patch-parser	0.01%	15.07 MiB/7.798 GiB	0.19%	21.47 MiB/3.333 MiB
rethinkdb	0.70%	116.9 MiB/7.798 GiB	1.46%	36.83 MiB/119.8 MiB
znc	0.04%	24.07 MiB/7.798 GiB	0.30%	2.652 MiB/2.045 MiB

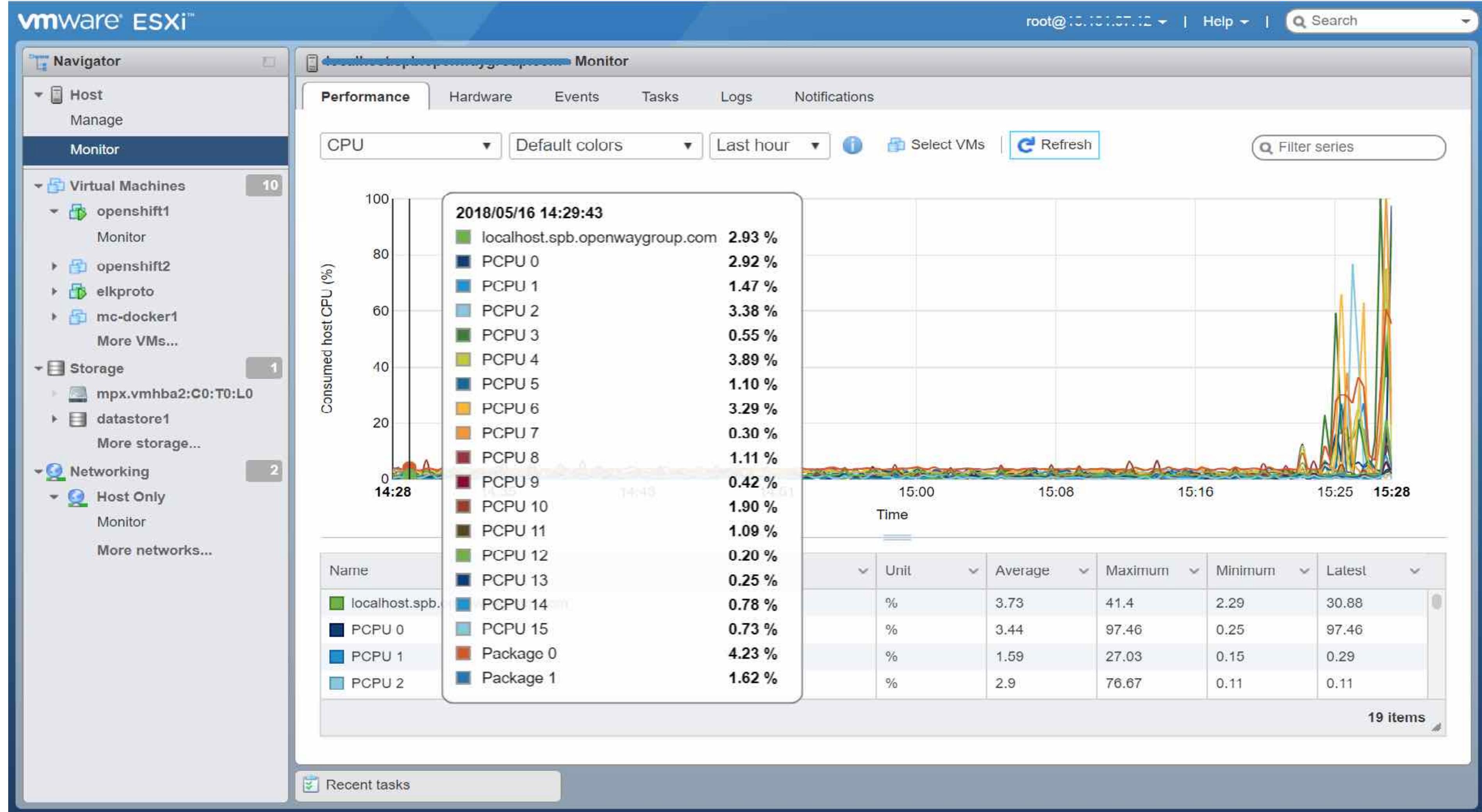
# Linux docker

4:10:33pm up 88 days 4:10, 637 worlds, 4 VMs, 14 vCPUs; CPU load average: 0.04, 0.03, 0.03  
 PCPU USED(%): 0.9 1.4 9.2 0.9 0.7 2.9 0.9 2.4 0.4 1.1 0.9 0.3 0.5 0.6 2.1 0.6 AVG: 1.6  
 PCPU UTIL(%): 1.4 2.2 7.6 1.3 1.2 4.7 1.6 3.9 0.6 1.6 1.5 0.5 0.7 1.0 3.2 1.0 AVG: 2.1  
 CORE UTIL(%): 3.5 8.8 5.7 4.9 2.2 1.9 1.7 4.1 AVG: 4.1

ID	GID	NAME	NWLD	%USED	%RUN	%SYS	%WAIT	%VMWAIT	%RDY	%IDLE
321619	321619	openshift1	12	10.42	14.98	0.11	1162.78	0.00	0.11	378.27
4059617	4059617	db-escrow	12	3.49	4.95	0.07	1172.77	3.10	0.14	384.57
4262160	4262160	esxtop.1115357	1	2.35	2.77	0.00	95.38	-	0.00	0.00
4058498	4058498	escrow-cards-ma	12	2.08	2.74	0.00	1174.91	0.42	0.21	389.41
1030426	1030426	elkproto	10	1.63	2.05	0.02	979.39	0.00	0.10	194.47
1	1	system	225	0.49	1541.90	0.00	20511.16	-	29.28	0.00
5550	5550	hostd.66880	33	0.19	0.23	0.00	3238.79	-	0.02	0.00
5298	5298	rhttpproxy.6684	20	0.05	0.06	0.00	1962.98	-	0.02	0.00
12043	12043	dcui.67814	4	0.04	0.07	0.00	392.48	-	0.07	0.00
1019	1019	vmsyslogd.65896	3	0.04	0.05	0.00	294.40	-	0.01	0.00
8	8	helper	131	0.04	0.05	0.00	12856.85	-	0.01	0.00
10664	10664	vpxa.67560	24	0.02	0.04	0.00	2355.67	-	0.02	0.00
11751	11751	sfcb-ProviderMa	9	0.02	0.02	0.00	883.37	-	0.00	0.00
4262032	4262032	sshd.1115338	1	0.02	0.02	0.00	98.13	-	0.00	0.00
2036	2036	net-lacp.66164	3	0.01	0.01	0.00	294.43	-	0.01	0.00
2399	2399	nfsgssd.66380	1	0.00	0.01	0.00	98.14	-	0.00	0.00
11311	11311	openwsmand.6767	3	0.00	0.01	0.00	294.45	-	0.01	0.00
3496	3496	ntpd.66611	1	0.00	0.00	0.00	98.15	-	0.00	0.00
9	9	drivers	12	0.00	0.00	0.00	1177.72	-	0.01	0.00
4465	4465	vmware-usbarbit	1	0.00	0.00	0.00	98.15	-	0.00	0.00
4097	4097	ioFilterVPServe	2	0.00	0.00	0.00	196.30	-	0.00	0.00
3840	3840	swapobjd.66656	1	0.00	0.00	0.00	98.15	-	0.00	0.00
10056	10056	dcbd.67482	1	0.00	0.00	0.00	98.15	-	0.00	0.00
2765	2765	busybox.66502	1	0.00	0.00	0.00	98.15	-	0.00	0.00
9704	9704	slpd.67433	1	0.00	0.00	0.00	98.15	-	0.00	0.00

esxtop

# VMware ESXi



# VMware ESXi console

# top, vmstat, iostat, fsstat, netstat and ldm list

```
root@sunsrv1:~# ldm list
```

NAME	STATE	FLAGS	CONS	VCPU	MEMORY	UTIL	NORM	UPTIME
primary	active	-n-cv-	UART	4	16G	4.0%	4.0%	697d 18h
as-sol	bound	-----	5005	8	8G			
netserv	active	-n----	5003	4	4G	6.1%	6.1%	17d 16h 10m
padss	active	-n----	5007	2	8G	8.3%	8.3%	199d 20h
solmnnode	active	-n----	5004	12	32G	2.7%	2.7%	196d 1h
sunset	active	-n----	5000	8	8G	0.4%	0.4%	196d
tcsol1	active	-n----	5001	8	12G	11%	11%	1d 10h 10m
tcsol2	active	-n----	5002	8	12G	0.2%	0.2%	22h 59m

# Oracle Solaris 11

**ORACLE®**  
SOLARIS

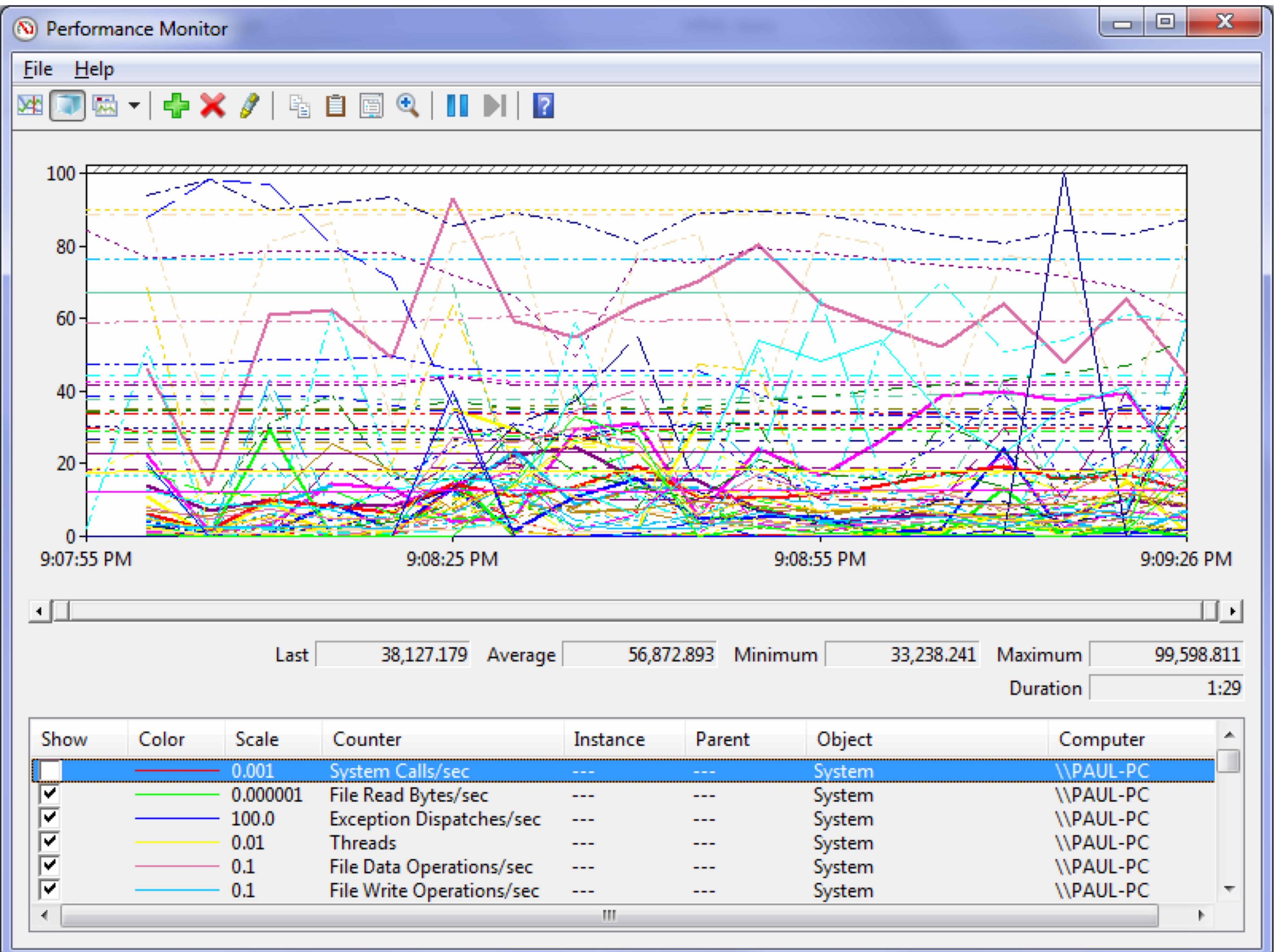
CPU	User%	Kern%	Wait%	Idle%	Physc	Entc%	Syscall	42284	Writtecn	58.6M
Total	27.1	55.8	1.8	15.4	13.32	332.89	Reads	5033	Rawin	12
Network	BPS	I-Pkts	O-Pkts	B-In	B-Out		Writes	4909	Ttyout	410
Total	157M	18.8K	110K	1.01M	156M		Forks	49	Igets	0
Disk	Busy%	BPS	TPS	B-Read	B-Writ		Execs	29	Namei	10887
Total	2.2	288M	2.50K	273M	14.8M		Runqueue	21.00	Dirblk	0
FileSystem		BPS	TPS	B-Read	B-Writ		Waitqueue	5.0		MEMORY
Total		169M	4.27K	164M	4.70M		PAGING		Real,MB	131072
Name		PID	CPU%	PgSp	Owner		Faults	60865	% Comp	48
oracle		15335782	2.9	41.4M	oracle		Steals	0	% Noncomp	44
oracle		44499414	2.8	41.6M	oracle		PgspIn	0	% Client	44
oracle		40960198	2.8	41.4M	oracle		PgspOut	0		
oracle		59769262	2.6	121M	oracle		PageIn	70054	PAGING SPACE	
oracle		47055006	2.6	15.6M	oracle		PageOut	3566	Size,MB	65536
oracle		60817436	2.4	12.1M	oracle		Sios	73888	% Used	0
oracle		28639618	2.3	11.7M	oracle				% Free	100
oracle		23921400	1.4	11.3M	oracle		NFS (calls/sec)			
oracle		16646458	1.3	33.8M	oracle		SerV2	0	WPAR Activ	0
guard_st		16580608	0.8	104M	root		CliV2	0	WPAR Total	0
aioserve		35979818	0.8	448K	oracle		SerV3	0	Press: "h"-help	
							CliV3	0	"q"-quit	

# IBM AIX

# topas

- Reports  
selected  
local and  
remote  
system  
statistics.





# Windows

**Multi-execution mode: commands are typed to all terminals (use Ctrl+Shift+Insert to paste)**

Multi-paste  Exit multi-execution mode

```
Topas Monitor for host:asemtest1
Wed May 16 16:20:38 2018 Interval:2
CPU      User% Kern% Wait% Idle%  Physc  Entc%
Total     0.1   0.4   0.0  99.5    0.02   0.99
Network   BPS I-Pkts O-Pkts B-In  B-Out
Total     1.84K 14.00 13.50 845.5  1.01K

Sessions
Disk    Busy% BPS TPS B-Read B-Writ
Total    0.0    0    0    0    0

Tools
Macros
File System
Macros
```

Disable this terminal from "MultiExec" mode

```
load averages: 0.23, 0.41, 0.43;          up 204+02:07:56 16:
1401 threads: 1392 sleeping, 8 zombie, 1 on cpu
CPU: 99.5% idle, 0.1% user, 0.4% kernel, 0.0% iowait, 0.0% swap
Kernel: 576 ctxtsw, 94 trap, 780 intr, 710 syscall, 56 flt
Memory: 8192M phys mem, 3368M free mem, 6144M total swap, 6144M free s

PID LWP USERNAME PRI NICE SIZE RES STATE TIME CPU COMMAND
28871 1 way4 59 0 5256K 4368K cpu/4 0:01 0.03% top
10694 1 103 59 0 6640K 2944K sleep 597:46 0.02% zabbix_
5247 33 way4 59 0 299M 230M sleep 6:55 0.01% java
5217 33 way4 59 0 352M 301M sleep 6:52 0.01% java
819 1 way4 59 0 5992K 3536K sleep 94:02 0.00% zabbix_
5217 11 way4 59 0 352M 301M sleep 2:42 0.00% java
5247 11 way4 59 0 299M 230M sleep 2:10 0.00% java
5217 57 way4 59 0 352M 301M sleep 0:10 0.00% java
18991 1 101 59 0 9648K 3080K sleep 1:45 0.00% zabbix_
10282 1 101 59 0 9520K 2744K sleep 47:34 0.00% zabbix_
28332 1 101 59 0 5864K 2808K sleep 5:55 0.00% zabbix_
27302 1 101 59 0 5864K 2912K sleep 0:26 0.00% zabbix_
818 1 way4 59 0 5992K 3088K sleep 45:46 0.00% zabbix_
5217 23 way4 59 0 352M 301M sleep 0:40 0.00% java
```

Disable this terminal from "MultiExec" mode

```
EVENTS/QUEUES FILE/TTY
Cswitch 287 Readch 44269
Syscall 1429 Writech 2189
Reads 53 Rawin 0
Writes 11 Ttyout 224
Forks 1 Igets 0
Execs 1 Namei 71
Runqueue 0 Dirblk 0
Waitqueue 0.0

MEMORY
PAGING Real,MB 32768
Faults 220 % Comp 15
Steals 0 % Noncomp 71
PgspIn 0 % Client 71
PgspOut 0

PAGEIN PageIn 0 PAGING SPACE
PageOut 0 Size,MB 512
Sios 0 % Used 4
% Free 96

NFS (calls/sec)
Serv2 0 WPAR Activ 0
CliV2 0 WPAR Total 0
Serv3 0 Press: "h"-help
CliV3 0 "q"-quit
Serv4 0
CliV4 0
```

Disable this terminal from "MultiExec" mode

```
top - 16:24:29 up 236 days, 22:24, 1 user, load average: 0.00, 0.01,
Tasks: 194 total, 1 running, 193 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.0/0.0 0[
%Node0 : 0.0/0.0 0[
KiB Mem : 16267504 total, 4928252 free, 830696 used, 10508556 buff/
KiB Swap: 2097148 total, 1939704 free, 157444 used. 14963152 avail
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+
12541	way4	20	0	157848	2384	1576	R	0.7	0.0	0:00.50
7015	way4	20	0	3924932	366728	17240	S	0.3	2.3	9:30.97
24846	zabbix	20	0	80992	1364	1224	S	0.3	0.0	16:18.74
1	root	20	0	46028	4644	2944	S	0.0	0.0	28:55.42
2	root	20	0	0	0	0	S	0.0	0.0	0:05.24
3	root	20	0	0	0	0	S	0.0	0.0	12:17.38
5	root	0	-20	0	0	0	S	0.0	0.0	0:00.00
7	root	rt	0	0	0	0	S	0.0	0.0	1:46.26
8	root	20	0	0	0	0	S	0.0	0.0	0:00.00
9	root	20	0	0	0	0	S	0.0	0.0	174:06.75
10	root	rt	0	0	0	0	S	0.0	0.0	1:13.33
11	root	rt	0	0	0	0	S	0.0	0.0	1:06.17
12	root	rt	0	0	0	0	S	0.0	0.0	1:42.32

Resource Monitor

File Monitor Help

Overview CPU Memory Disk Network

CPU 53% CPU Usage 123% Maxim...

Image	PID	Descri...	Status	Threads
ShellExperienceHost...	3592	Wind...	Suspe...	34
SearchUI.exe	15628	Searc...	Suspe...	51
SkypeHost.exe	1292	Micro...	Suspe...	54
LockApp.exe	28872	LockA...	Suspe...	13
WinStore.App.exe	19140	Store	Suspe...	30
Music.UI.exe	33000	Music...	Suspe...	17
SystemSettings.exe	5436	Settings	Suspe...	49
Calculator.exe	14168	Calcul...	Suspe...	23

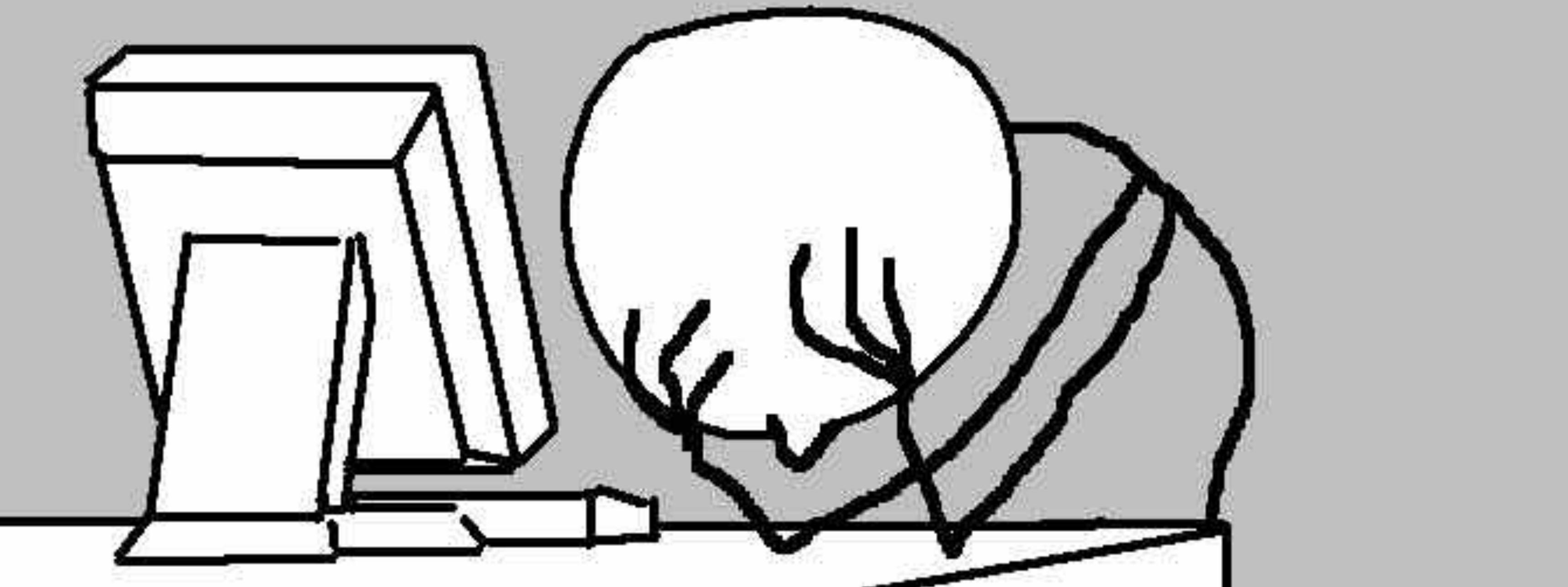
CPU 100%

Disk 1 MB/sec

Network 18 Kbps Netw... 0% Network U...

# Mix them all . . .

Should I buy commercial soft  
or  
use opensource for  
operational monitoring\*?



...

Last 20 issues

HOST	ISSUE	LAST CHANGE	AGE	INFO	ACK	ACTIONS
Zabbix server 1	Zabbix discoverer processes more than 75% busy	2016-02-12 10:43:39	4m 33s	No	1	<a href="#">... SCRIPTS Default Local</a>
Zabbix server 1	Detect operating system	2016-02-12 10:43:39	4m 33s	Yes	4	<a href="#">... Other Ping Traceroute</a>
Zabbix server 1	Latest data	2016-02-12 10:43:39	4m 33s	shown	Updated: 10:48:12	<a href="#">... Host inventory</a>
Zabbix server 1	Triggers	2016-02-12 10:43:39	4m 33s	0	0	<a href="#">... Host screens</a>
Zabbix server 1	Graphs	2016-02-12 10:43:39	4m 33s	0	0	<a href="#">... Host screens</a>
Zabbix server 1	Host screens	2016-02-12 10:43:39	4m 33s	0	0	<a href="#">... Host screens</a>

AVERAGE WARNING INFORMATION NOT CLASSIFIED

0	0	0	0
0	0	0	0

HOSTS TRIGGERS GRAPHS SCREENS

SCRIPTS Default Local

GO TO Host inventory Latest data Triggers Graphs Host screens

Detect operating system Other Ping Traceroute

...  
Host inventory  
Latest data  
Triggers  
Graphs  
Host screens

...  
Other  
Ping  
Traceroute

...  
Host screens

...  
Host screens

...  
Host screens

# Monitoring & Management

# 1. Define business needs / domain (simple as possible)

1. E.g. we need to monitor **Servers => Applications => Business Services**
2. Our metrics are: **CPU/RAM usage, Application status, Uptime, Errors Count, TPS**
3. **Multiplatform!!!**

# 2. Evaluate: Calculate Cost and ROI

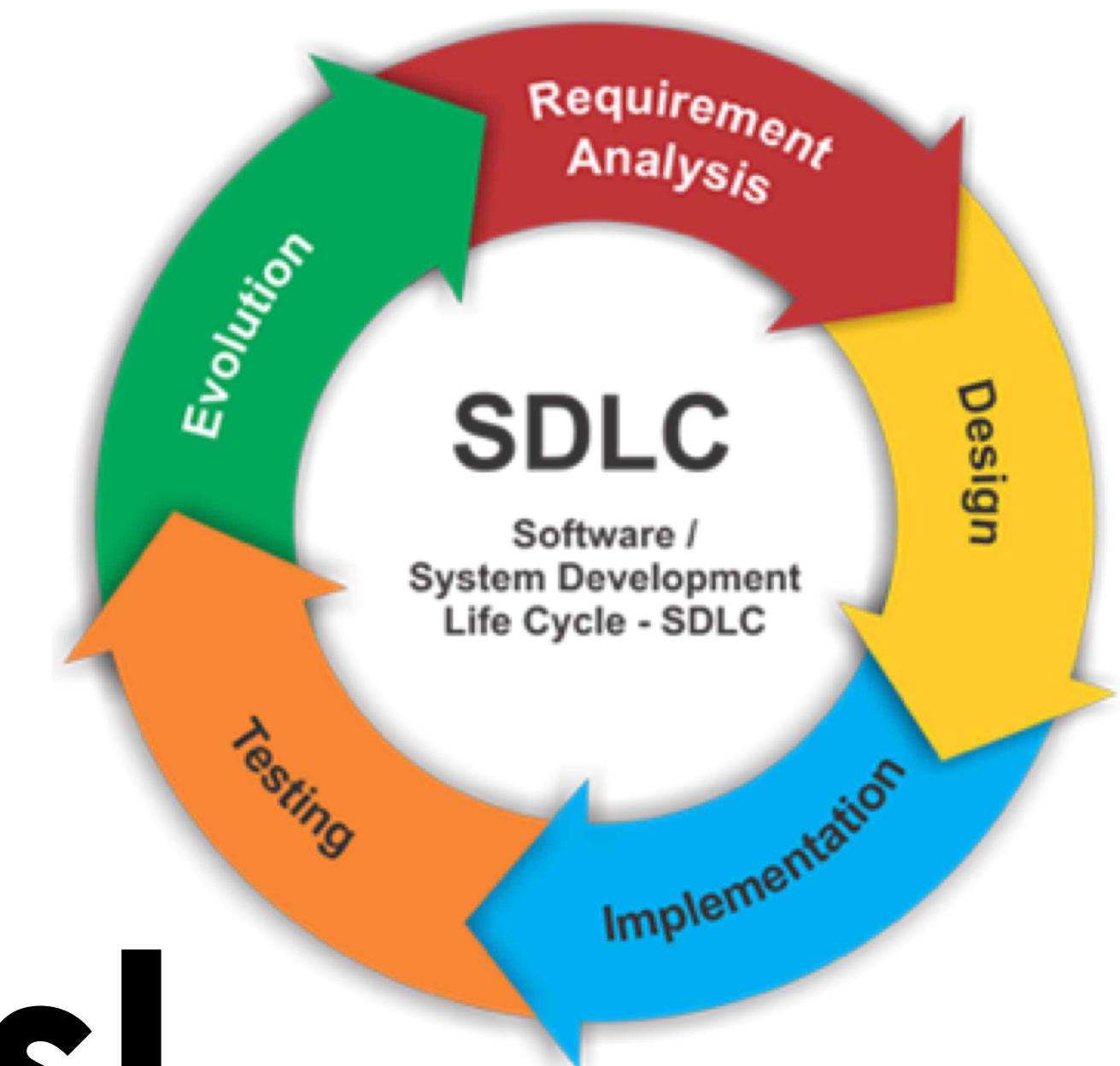
1. **Planning + Architecture**
2. (Master/Slave + CQRS + **Java**) + PoC (5 nodes cluster)

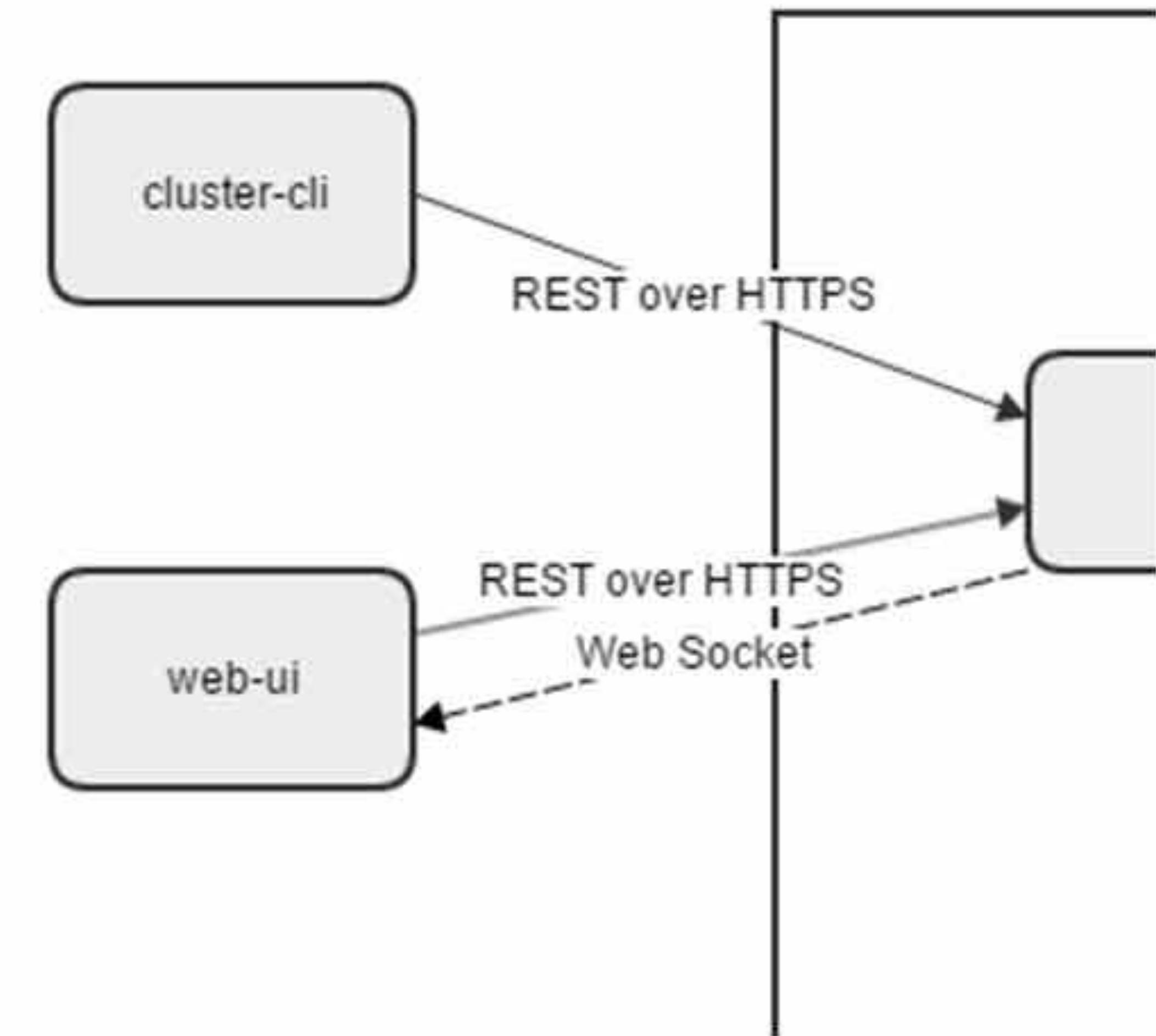
# 3. Produce it

1. Development + Dev QA + DevOps + Pilot QA + ProdOps

# 4. Profit!

You have developers!





## AWS-compatible REST

# Typical architecture

# Servers = OS

≡ way4 Application Server Console      admin

- Applications
- Services
- Servers
- Configurations
- Actions

### Servers List

REFRESH

	SERVER	IP	TYPE	VERSION	STATUS	CPU USAGE	MEMORY	UPTIME	OPERATING SYSTEM
	[REDACTED]	[REDACTED]	master	1.7.702	● UP	1 %	87 %	21:02:13	AIX(7.2)
	[REDACTED]	[REDACTED]	slave	1.7.702	● UP	1 %	87 %	21:19:10	AIX(7.2)
	[REDACTED]	[REDACTED]	master	1.7.702	● UP	2 %	64 %	22:05:19	Linux(3.10.0-693.17.1.el7.x86_64)
	[REDACTED]	[REDACTED]	master	1.7.702	● UP	2 %	63 %	22:02:01	Linux(3.10.0-693.17.1.el7.x86_64)
	[REDACTED]	[REDACTED]	master	1.7.702	● UP	0 %	47 %	21:14:50	Linux(3.10.0-693.17.1.el7.x86_64)
	[REDACTED]	[REDACTED]	slave	1.7.702	● UP	0 %	64 %	21:45:33	Linux(3.10.0-693.17.1.el7.x86_64)
	[REDACTED]	[REDACTED]	slave	1.7.702	● UP	0 %	62 %	22:17:05	Windows Server 2012 R2

1-7 of 7

 Applications Services Servers Configurations Actions

## Applications List

 ADD FILTER REFRESH

Name

logag

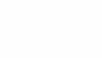
 Server

NAME	SERVER	STATUS	ACTIONS	VERSION	RESTARTS	HTTP PORT	START TIME
logagent	[REDACTED]	● STARTED	  	2.0.909	0		18-05-07 19:51
logagent	[REDACTED]	● STARTED	  	2.0.909	0		18-05-07 19:36
logagent	[REDACTED]	● STOPPED	  	2.0.909	0		
logagent	[REDACTED]	● STOPPED	  	2.0.909	0		
logagent	[REDACTED]	● STOPPED	  	2.0.909	0		
logagent	[REDACTED]	● STOPPED	  	2.0.909	0		
logagent	[REDACTED]	● STOPPED	  	2.0.909	0		

# Business+OS = Applications

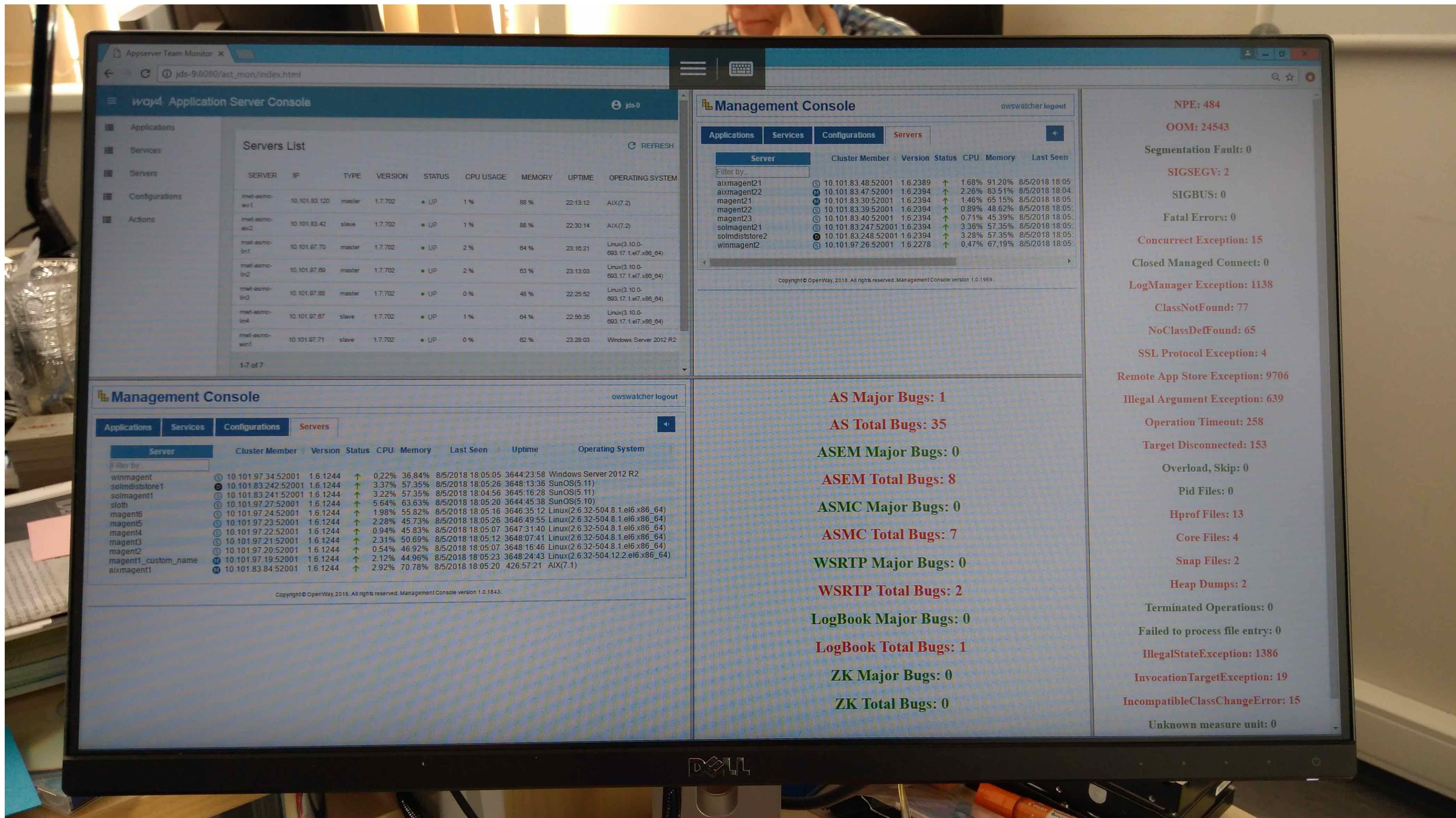
## Services List

 ADD FILTER REFRESH

Service	Application	Server	Status	Status Codes		Actions	SRV	SRV Error
AcqDB	[REDACTED]	[REDACTED]	<span>● STARTED</span>			  	0	0
HSMAdapter	[REDACTED]	[REDACTED]	<span>● STARTED</span>			   	0	5 305
MC_CREDIT	[REDACTED]	[REDACTED]	<span>● MALFUNCTION</span>	<span>DISCONN01</span>	<span>UNAVAIL01</span>	   	0	0
Platform	[REDACTED]	[REDACTED]	<span>● STARTED</span>			   	0	0
WAY4DB	[REDACTED]	[REDACTED]	<span>● STARTED</span>			   	1 330	0

1-5 of 5

# Business = Services



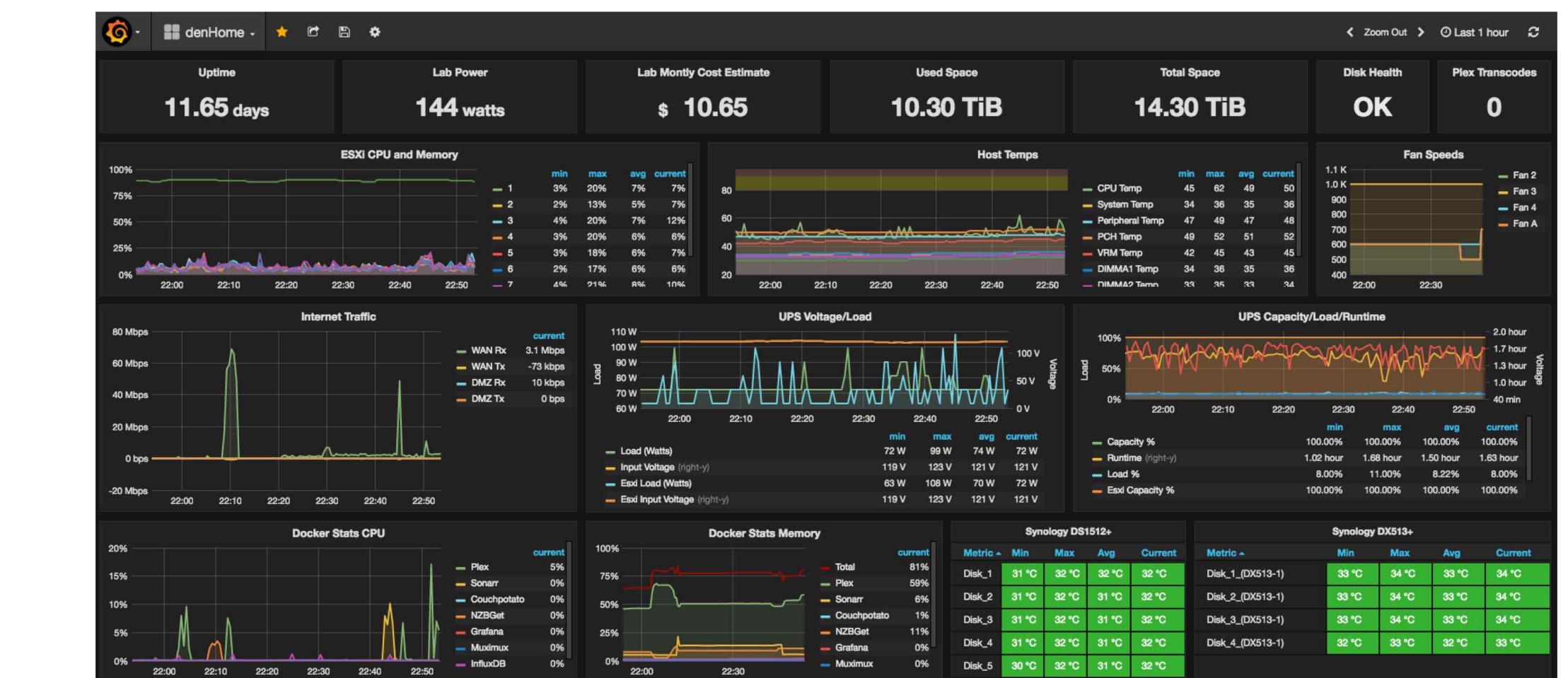
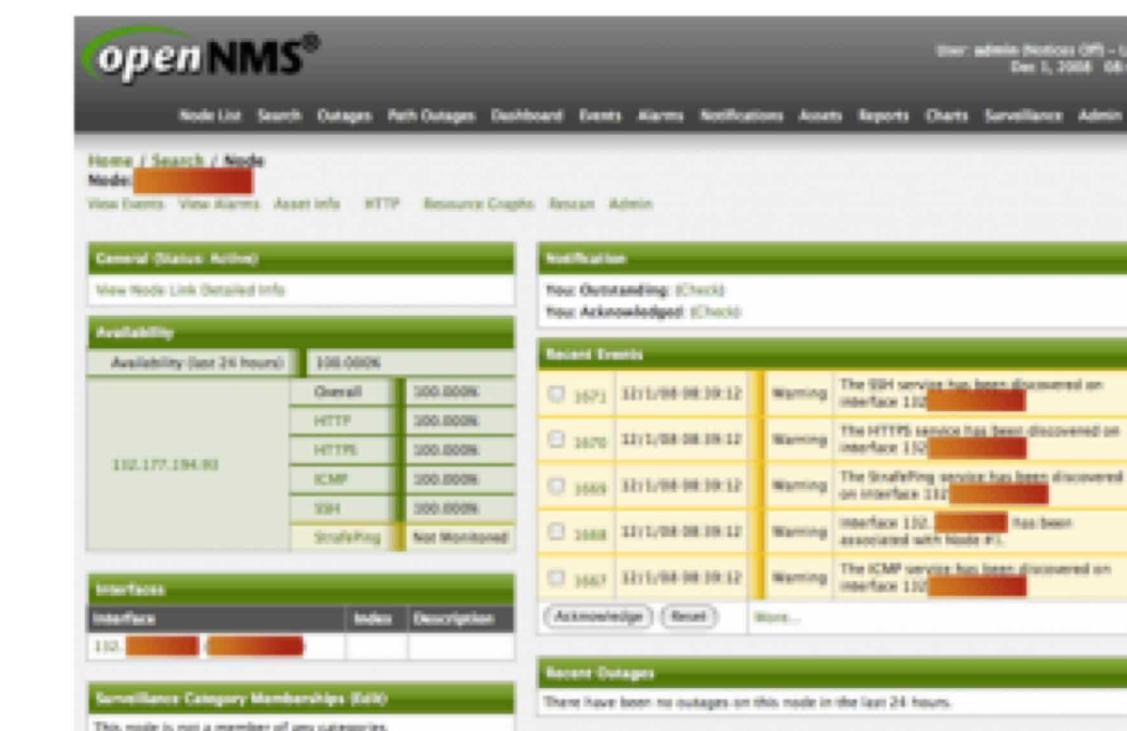
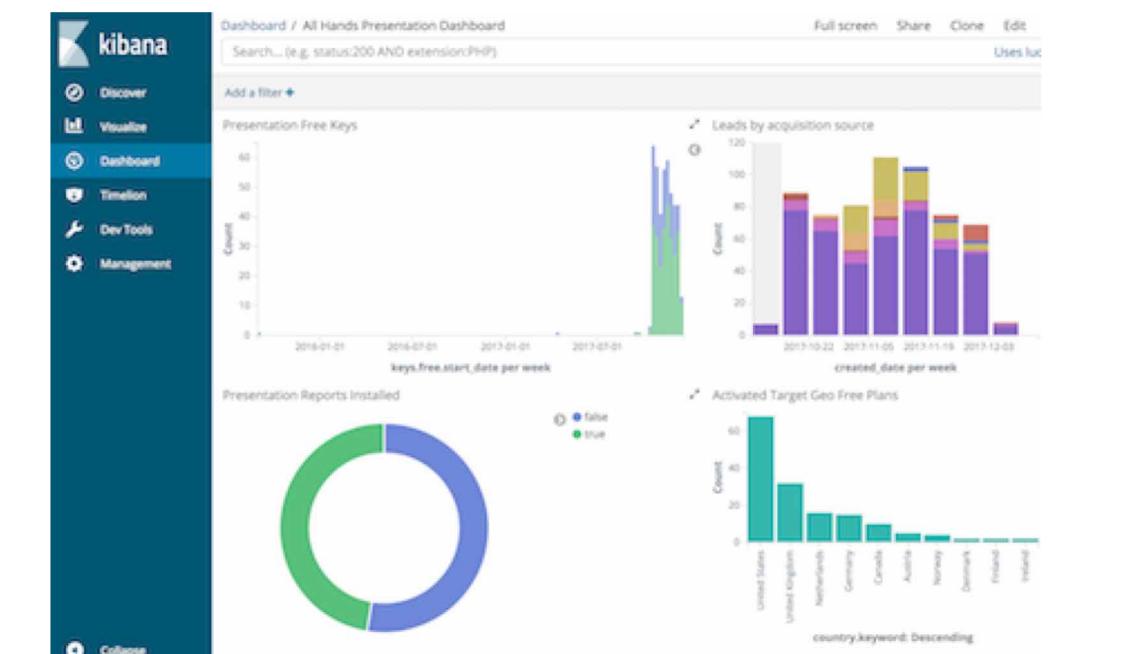
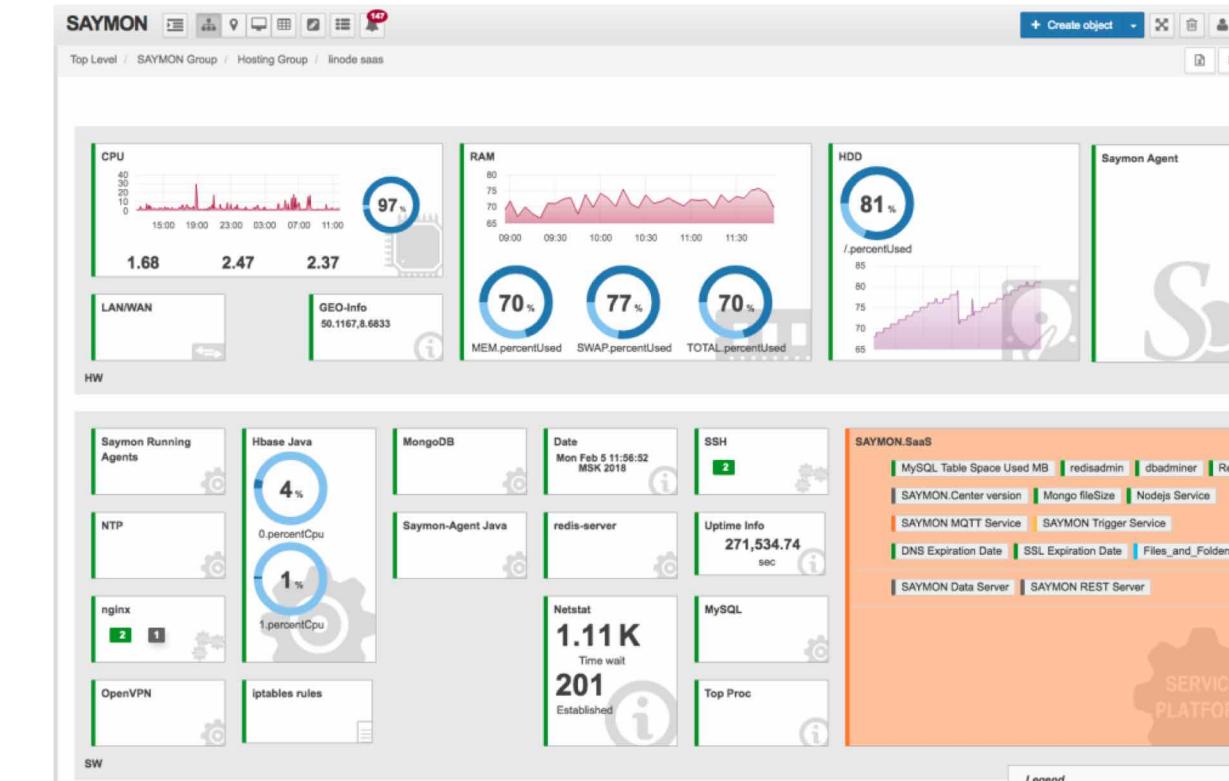
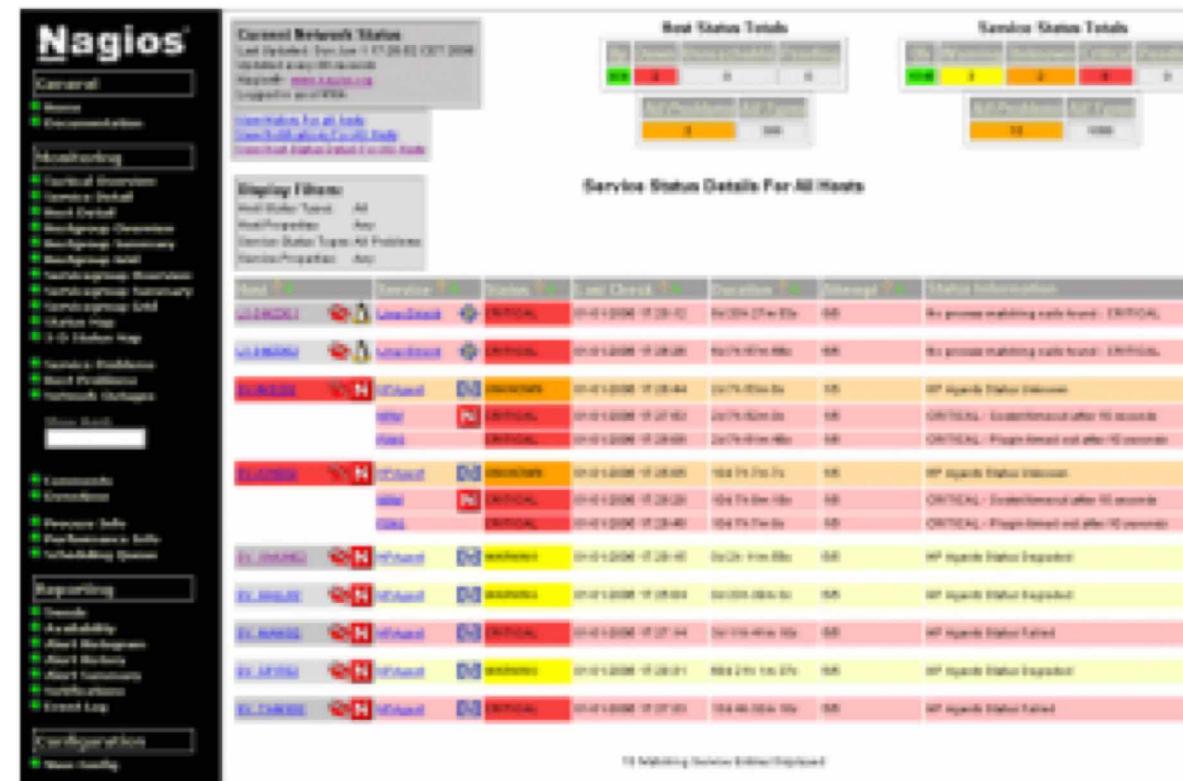
# Aggregate them all: profit !

C:\WAY4ApplicationServer\appserver\applications\m\_tools\commands>apps.cmd

Application	Server	State	MemoryUsed	StartedTime	Restarts	HttpPort
examples	[REDACTED]	STARTED	31.1m	16-05-17 13:26	0	14750
logagent	[REDACTED]	STOPPED			0	0
logagent	[REDACTED]	STOPPED			0	0
logagent	[REDACTED]	STARTED	41.7m	16-05-17 13:24	0	0
monitoring	[REDACTED]	STARTED	76.2m	16-05-17 13:24	0	0
trsW	[REDACTED]	STARTED	71.5m	16-05-17 13:25	0	10200

Cluster CLI profit 😊

# Other way





# Thank you!

# Your way4

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