

Modernes System-Management

Alles ist ein Stream

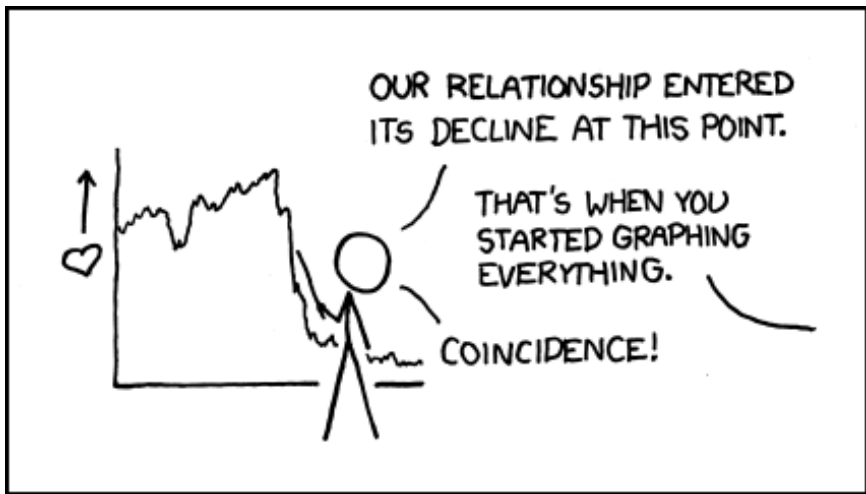
Sebastian 'tokkee' Harl
<sh@tokkee.org>

Grazer Linxutage 2015
25. April 2015
Graz



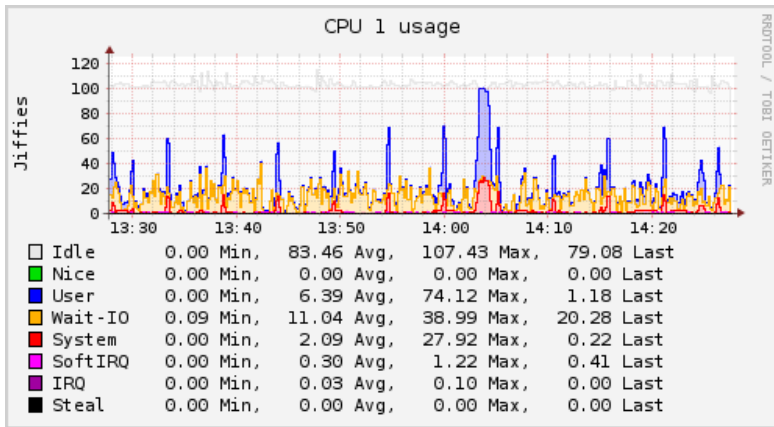


- Monitoring
- Automatisierung
- Logging (Monitoring, Debugging)
- Performance Analyse
- Provisionierung
- Inventarisierung
- ...



(Fast) Alles ist ein Stream

Streams sind Graphen



Monitoring?



Monitor: Hallo, wie geht es dir?

System: Hallo, alles okay.

Monitor: Gut :-)

Monitoring?



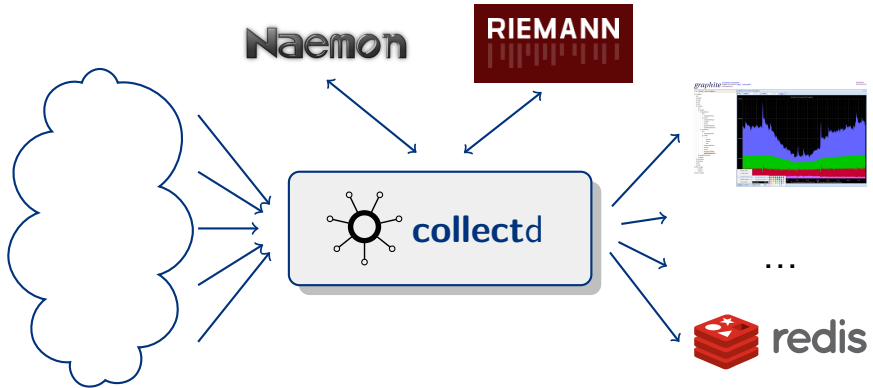
Monitor: Hallo, wie geht es dir?

System: Hallo, alles okay.

Monitor: Gut :-)

Und wenn nicht?

Beispiel: collectd



<https://collectd.org/>

Beispiel: Riemann



Health

	cpu	disk /	disk /boot	disk /disk1	disk /disk2	disk /ssd1	disk /ssd2	disk /ssd3	load	memory
api1.tx	0.39	0.53	0.67	0.01	0.80				0.14	0.48
api2.tx	0.43	0.41	0.67	0.01	0.78				0.18	0.50
api3.tx	0.38	0.43	0.67	0.01	0.81				0.17	0.53
api4.tx	0.35	0.42	0.67	0.01	0.78				0.18	0.51
api5.tx	0.47	0.42	0.67	0.01	0.77				0.14	0.53
api7.tx	0.36	0.41	0.67	0.01	0.80				0.18	0.51
be1.tx	0.10	0.03	0.53						0.02	0.26
be2.tx	0.15	0.04	0.53						0.06	0.37
hub3.tx	0.01	0.01	0.43						0.01	0.31
importer.tx	0.06	0.14	0.45		0.01				0.00	0.57
solr2.tx	0.25	0.44	0.67			0.90	0.28	0.40	0.94	0.79

jeue

ns	0.00
>let_batched_user_import	2.00
>let_featured	0.00
>let_feed	0.00
>let_importer_feed	0.00
>let_thumbnails	0.00

API

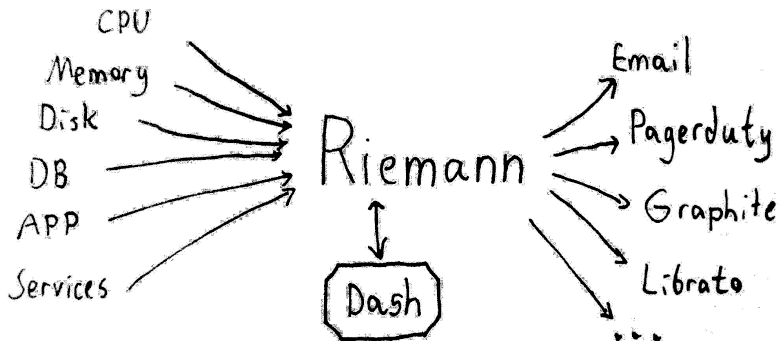
0	0.5	0.95	0.99	1	rate
8.45	59.85	154.00	201.35	201.35	9.68

Importer

facebook rate	feed creator rate	tumblr rate	twitter rate	youtube rate
11.23		1.00	30.98	1.00

<http://riemann.io/>

Beispiel: Riemann



<http://riemann.io/>



“KISS”

One tool, one job

```
% grep dat007 \  
| awk '{print $2,$5}' \  
| sort | uniq -c | sort -n
```

OUR RELATIONSHIP ENTERED
ITS DECLINE AT THIS POINT.



THAT'S WHEN YOU
STARTED GRAPHING
EVERYTHING.

COINCIDENCE!

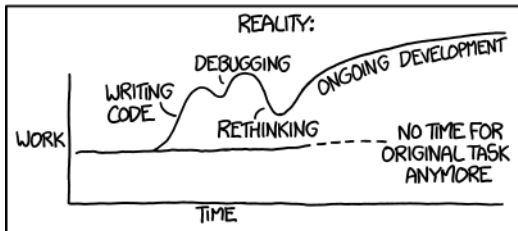
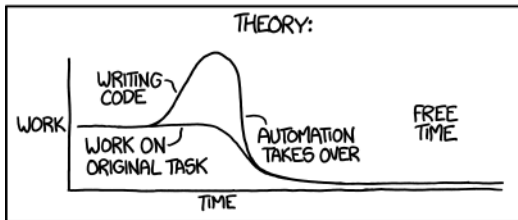
Events

Beispiel: ELK



Automatisierung

"I SPEND A LOT OF TIME ON THIS TASK.
I SHOULD WRITE A PROGRAM AUTOMATING IT!"





- Konfigurationsmanagement
- Deployment
- Life-Cycle Management
- Inventarisierung

Beispiel: Puppet + Foreman



Overview

Generated at 09 Jan 12:58

Description	Count
Hosts that had performed modifications without error	4
Hosts in Error State	0
Good Host Reports in the last 35 minutes	11 / 28 hosts (39%)
Hosts that had pending changes	0
Out Of Sync Hosts	4
Hosts With File Reports	1
Hosts With Alerts Disabled	0

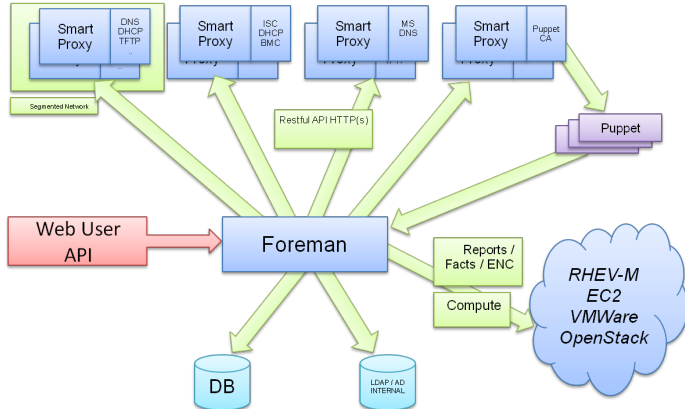
Puppet Clients Activity Overview

Pun Distribution in the last 30 minutes

Version 3.2014 © 2009-2013 Paul Holly and Chad Leroy Help | Wiki | Support

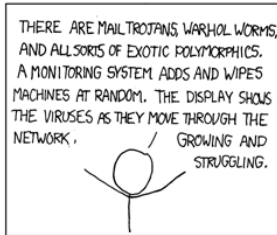
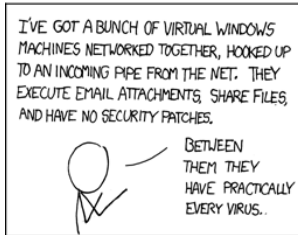
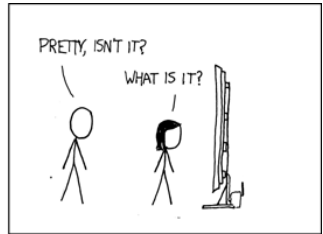
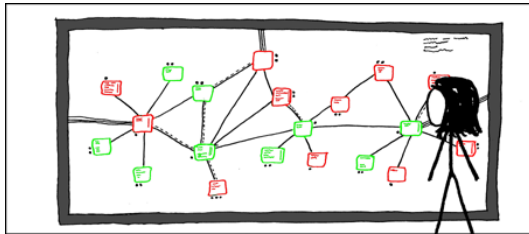
<http://theforeman.org>

Beispiel: Puppet + Foreman



<http://theforeman.org>

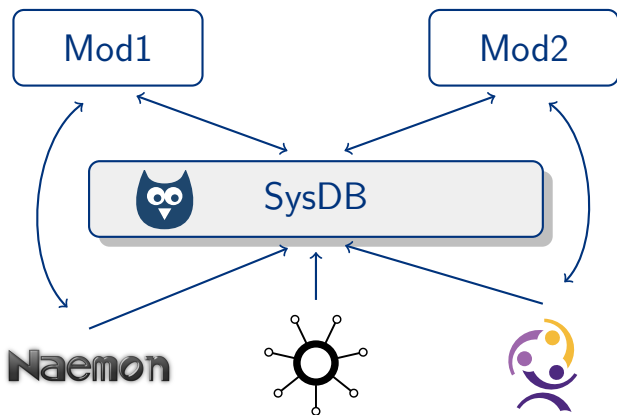
Das System. Es lebt!





- Aggregation von Informationen
→ “Business Process” Ansicht
- Abgleich von verschiedenen
Verwaltungssystemen
- Verlinkungen: Drill-in

Beispiel: SysDB



<https://sysdb.io/>



metrics: hosts.attribute['lsbdistid']:Debian

GO

Hosts

Services

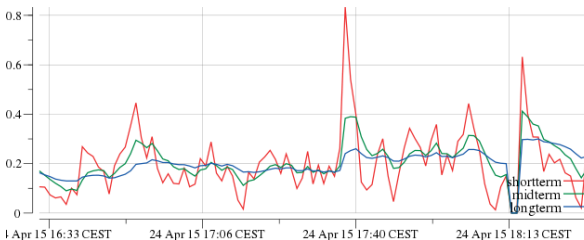
Metrics

Metric whisky.tokkee.net — load/load

Time range: 2015-04-24 15:30:00

— 2015-04-24 17:30:00

Apply



Host	whisky.tokkee.net
Last update	2015-04-25 09:32:11 +0200 CEST
Update interval	9.999951626s
Backends	[backend::collectd::unixsock]
Attributes	
plugin	load
type	load



- Erweiterbarkeit:
 - Plugins
 - offene APIs / Protokolle
 - REST, gRPC, JSON, protobuf
- Instrumentarisierung (Monitoring!)
- KISS: “Microservices”

Standard APIs

HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)





Danke für die Aufmerksamkeit!

Fragen, Kommentare, Anmerkungen, Rants?



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