I Love Logging

Structured Logging with Free/OpenSource Tools

Jens Kühnel

About Jens Kühnel

Freelancing Trainer, System Administrator, Consultant and Author since 2000

Bachelor of Science in Computer Science

This is based on my thesis,

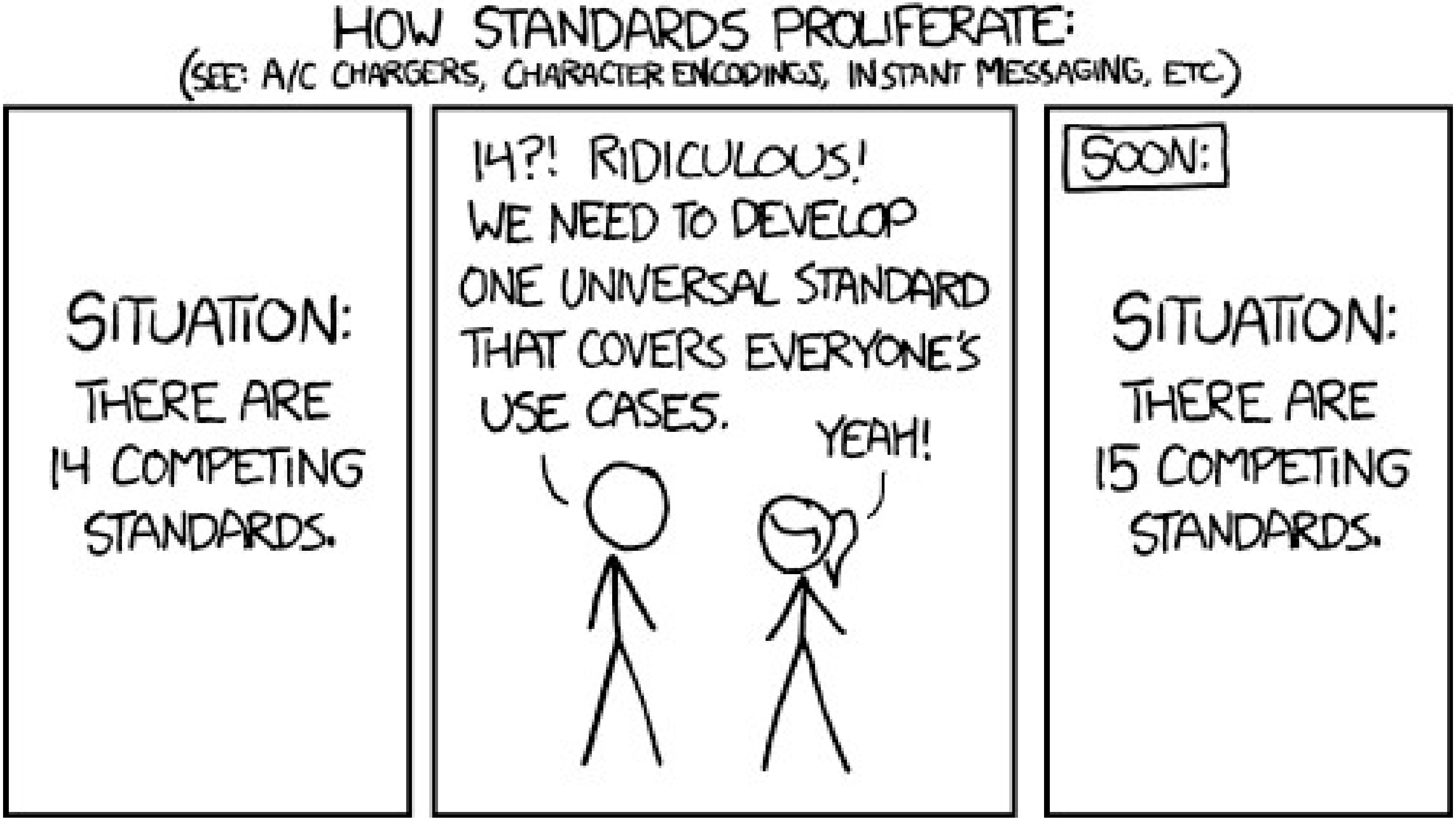
available at http://it-hure.de/

I Love Logging

Informal Mailinglist of people interested in OpenSource Logging using different tools.

syslog vs. structured Logging

Formats

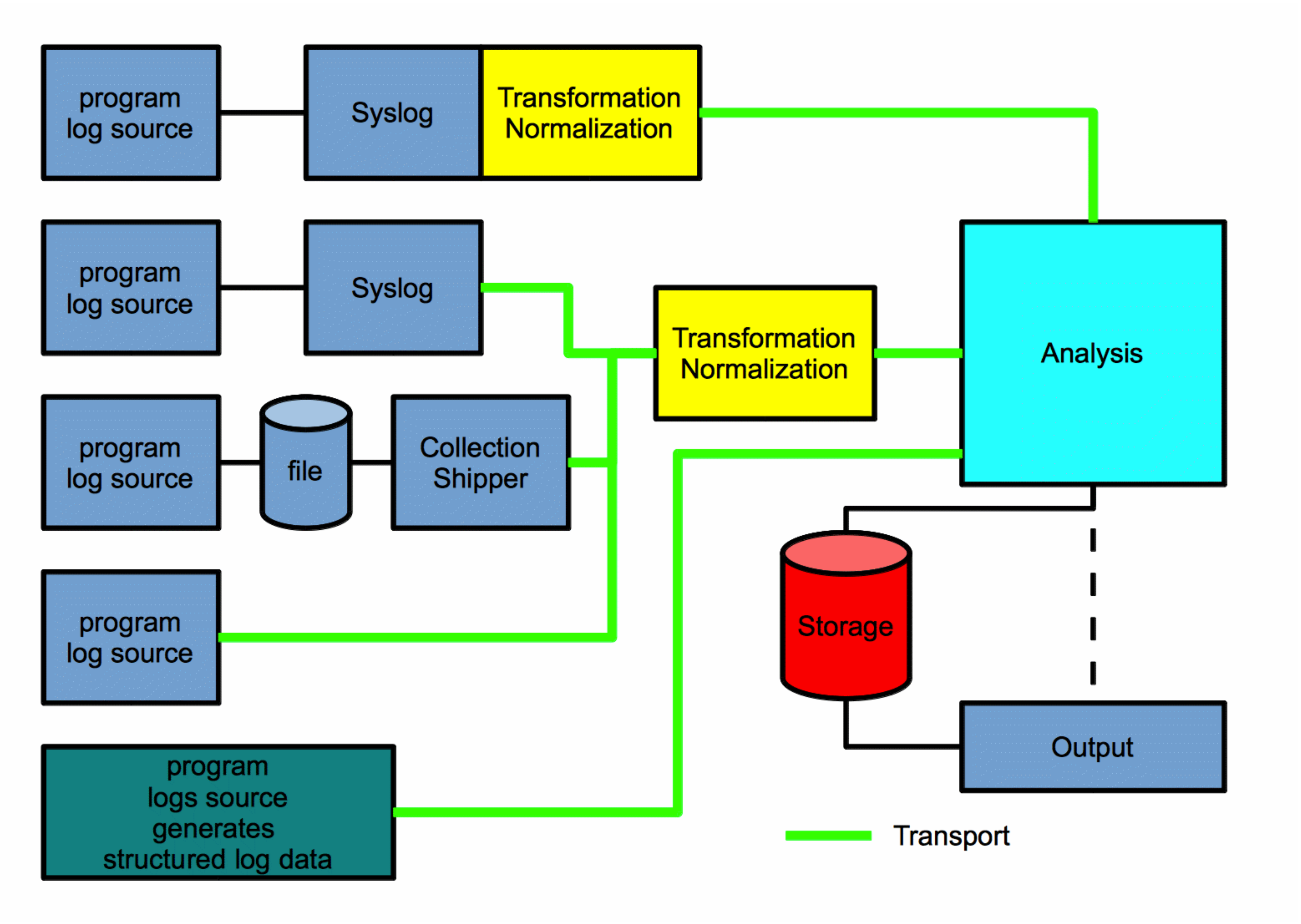

HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)
SITUATION: THERE ARE 14 COMPETING STANDARDS.
14?! RIDICULOUS! WE NEED TO DEVELOP ONE UNIVERSAL STANDARD THAT COVERS EVERYONE'S USE CASES.
YEAH!
SOON:
SITUATION: THERE ARE 15 COMPETING STANDARDS.

Source: http://xkcd.com/927/

Formats

- syslog BSD and IETF
- JSON
  - CEE / Project Lumberjack
  - GELF
  - logstash
  - systemd Journal

Ways of the log message



Transport

syslog IETF/BSD TCP/UDP/(RELP)

redis

AMQP/STOMP (ActiveMQ/RabbitMQ)

0mq

logstash-forwarder (Lumberjack)

Storage

Elasticsearch

(mongo)

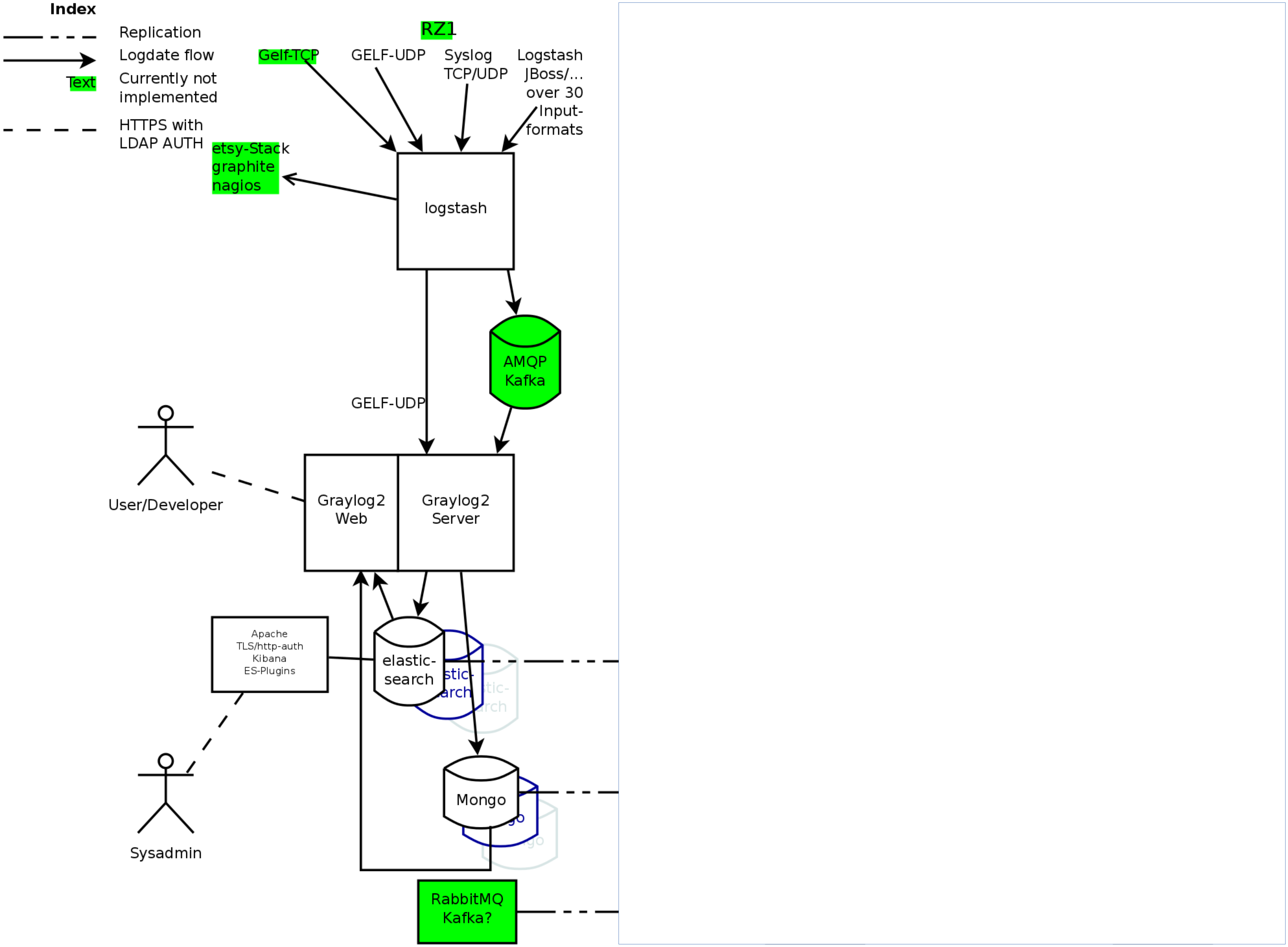
Major Tools

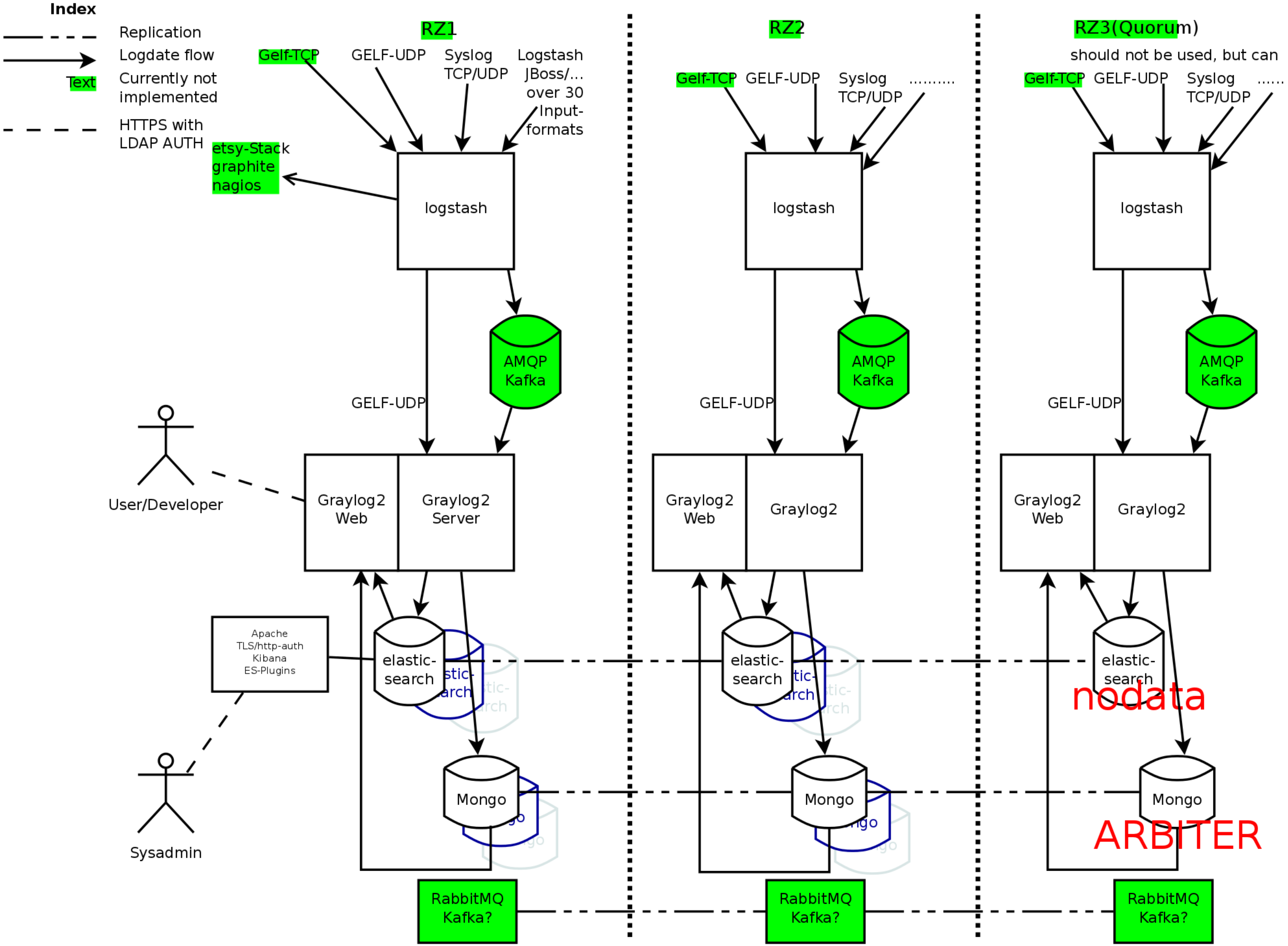
- Rsyslog TSN
- Syslog-ng TSN
- Graylog2 NO
- Logstash TSN
- Kibana O

T=Transport, S=Shipper, N=Normalization,
O=Output

My search for a logging solution

- Requirements
  - User separation
  - Interactive search
  - Automatic normalization
  - Widespread use
- Used Tools at the Moment:
  - Graylog2
  - Logstash
  - rsyslog
  - ....


Index
Replication
Logdate flow
Text
Currently not implemented
HTTPS with LDAP AUTH
RZ1
Gelf-TCP
GELF-UDP
Syslog TCP/UDP
Logstash JBoss/... over 30 Input-formats
etsy-Stack graphite nagios
logstash
AMQP Kafka
GELF-UDP
User/Developer
Graylog2 Web
Graylog2 Server
Apache TLS/http-auth Kibana ES-Plugins
elastic-search
Mongo
Sysadmin
RabbitMQ Kafka?


Index
Replication
Logdate flow
Text
Currently not implemented
HTTPS with LDAP AUTH
RZ1
Gelf-TCP
GELF-UDP
Syslog TCP/UDP
Logstash JBoss/... over 30 Input-formats
etsy-Stack graphite nagios
logstash
AMQP Kafka
GELF-UDP
User/Developer
Graylog2 Web
Graylog2 Server
Apache TLS/http-auth Kibana ES-Plugins
elastic-search
Mongo
Sysadmin
RabbitMQ Kafka?
RZ2
Gelf-TCP
GELF-UDP
Syslog TCP/UDP
....
logstash
AMQP Kafka
GELF-UDP
Graylog2 Web
Graylog2
elastic-search
Mongo
RabbitMQ Kafka?
RZ3(Quorum)
should not be used, but can
Gelf-TCP
GELF-UDP
Syslog TCP/UDP
......
logstash
AMQP Kafka
GELF-UDP
Graylog2 Web
Graylog2
elastic-search
nodata
Mongo
ARBITER
RabbitMQ Kafka?

I Love logging

Join the logging fun :-)
http://Ilovelogging.org/

My bachelor thesis will be available there soon.