

Reportnet operations

Notifications

- Reportnet sends notifications to users when significant events happen:
 - Delivery made to CDR
 - Manual feedback posted
 - Change to data definition
 - Upcoming deadline
- Users can subscribe to some or all events

Notifications

- The applications sends the notification to UNS, which then disseminates to the subscribers

Metadata glue

- Core reference and event data is harvested by Content Registry
 - Obligations
 - Deliveries
 - QA results
 - User records
- Enables managers to query the state of the dataflows in various ways

Eionet helpdesk

- Open 9-17 on business days
- All requests arrive as email and are collected in a helpdesk application called OTRS
 - Open source
 - Facilitates followup, reminders etc.



Helpdesk organisation

- We have one generic and several specialised helpdesks
- Operated by 1-2 first level responders
 - First response within one hour
- Can escalate to experts or software developers

Monitoring

- The purpose of monitoring is to detect issues and fix them before they affect users
- Using Check_MK

Monitoring

Tactical Overview

Hosts	Problems	Unhandled
120	0	0
Services	Problems	Unhandled
2967	14	4

Quicksearch

Views

- Dashboards
 - Main Overview
- Hosts
 - All hosts
 - All hosts (Mini)
 - All hosts (tiled)
 - Host search
- Hostgroups
- Services
 - All services
 - Recently changed services
 - Serv. by host groups
 - Service search
- Servicegroups
 - Servicegroups (Grid)
 - Servicegroups (Summary)
 - Services by group
- Business Intelligence
- Problems
 - Alert Statistics
 - Host problems
 - Pending Services
 - Service problems
 - Unchecked services
- Addons
 - Search Graphs

WATO
 Host comments
 Edit View
 ...

reportnet

State	Service	Icons	Status detail	Age	Checked	Perf-O-Meter
OK	Check_MK		OK - Agent version 1.2.4p5, execution time 0.3 sec	2017-01-05 11:58:22	108 sec	0.3s
OK	Check_MK inventory		OK - no unchecked services found	2015-05-04 22:11:05	26 min	
OK	CPU load		OK - 15min load 0.05 at 1 CPUs	2015-03-24 17:00:06	108 sec	0.0
OK	CPU utilization		OK - user: 0.0%, system: 0.0%, wait: 0.0%	2015-03-24 17:00:06	108 sec	0%
OK	Disk IO SUMMARY		OK - 0.00B/sec read, 136.53B/sec write, IOs: 0.02/sec, Latency: 1.14ms	2015-03-24 17:20:06	108 sec	0.00M/s 0.00M/s
OK	fs_/		OK - 13.9% used (2.15 of 15.5 GB), (levels at 92.0/95.0%), trend: +2.64kB / 24 hours	2015-03-24 17:00:06	108 sec	13%
OK	fs_/boot		OK - 85.9% used (0.20 of 0.2 GB), (levels at 93.1/97.7%), trend: -0.00B / 24 hours	2015-07-10 17:26:55	108 sec	85%
OK	HTTP s-team-uns.eionet		HTTP OK: HTTP/1.1 200 OK - 22995 bytes in 0.047 second response time	19 hrs	8 min	46.8 ms
OK	HTTP s-team-uns.eionet.europa.eu		HTTP OK: HTTP/1.1 302 Moved Temporarily - 311 bytes in 0.022 second response time	2017-02-01 18:03:47	8 min	22.3 ms
OK	Interface 2		OK - [eth0] (up) speed unknown, in: 53.61B/s, out: 68.34B/s	2015-03-24 17:00:06	108 sec	53.6B/s 68.3B/s
OK	Kernel Context Switches		OK - 10/s in last 600 secs	2015-03-24 17:05:06	108 sec	9.8/s
OK	Kernel Major Page Faults		OK - 0/s in last 600 secs	2015-03-24 17:05:06	108 sec	0.0/s
OK	Kernel Process Creations		OK - 0/s in last 600 secs	2015-03-24 17:05:06	108 sec	0.1/s
OK	Memory used		OK - 0.20 GB used (0.20 GB RAM + 0.00 GB SWAP, this is 20.5% of 0.97 GB RAM)	2015-03-24 17:00:06	108 sec	20%
OK	Mount options of /		OK - mount options exactly as expected	2015-09-17 10:20:30	108 sec	
OK	Mount options of /boot		OK - mount options exactly as expected	2015-09-17 10:20:30	108 sec	
OK	Number of threads		OK - 97 threads	2015-03-24 17:00:06	108 sec	97

User authentication/authorisation

- All users are registered in Eionet site directory
 - LDAP database implemented with OpenLDAP
- Web UI to facilitate change of passwords, address, phone etc.
- Web UI to assign membership to LDAP groups
 - For authorisation and mailing lists

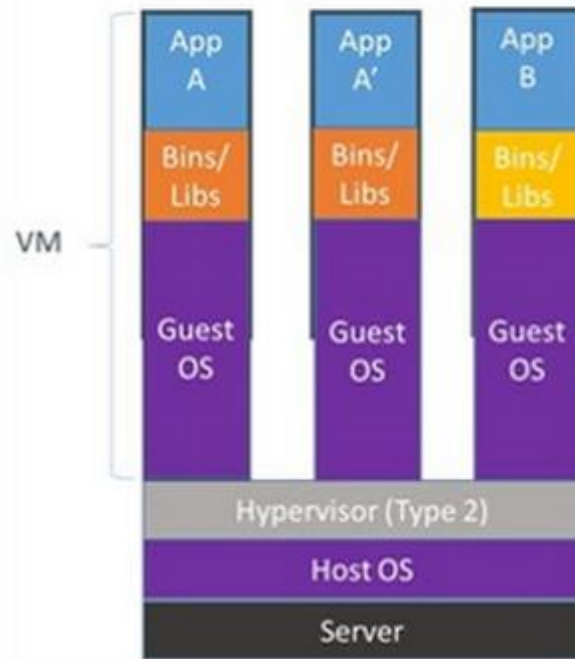
Deployment of Reportnet software

- There are frequent improvements to the software
- The individual services are delivered as Docker images from the consultants
 - All dependencies on Operating System and libraries are solved and tested together

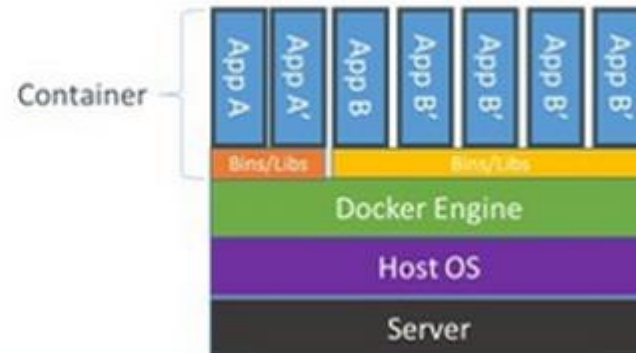


Container principles

Containers vs. VMs



Containers are isolated, but share OS and, where appropriate, bins/libraries



Dockerfile

```
FROM tomcat:7
```

```
COPY eprtr.war /usr/local/tomcat/webapps
```

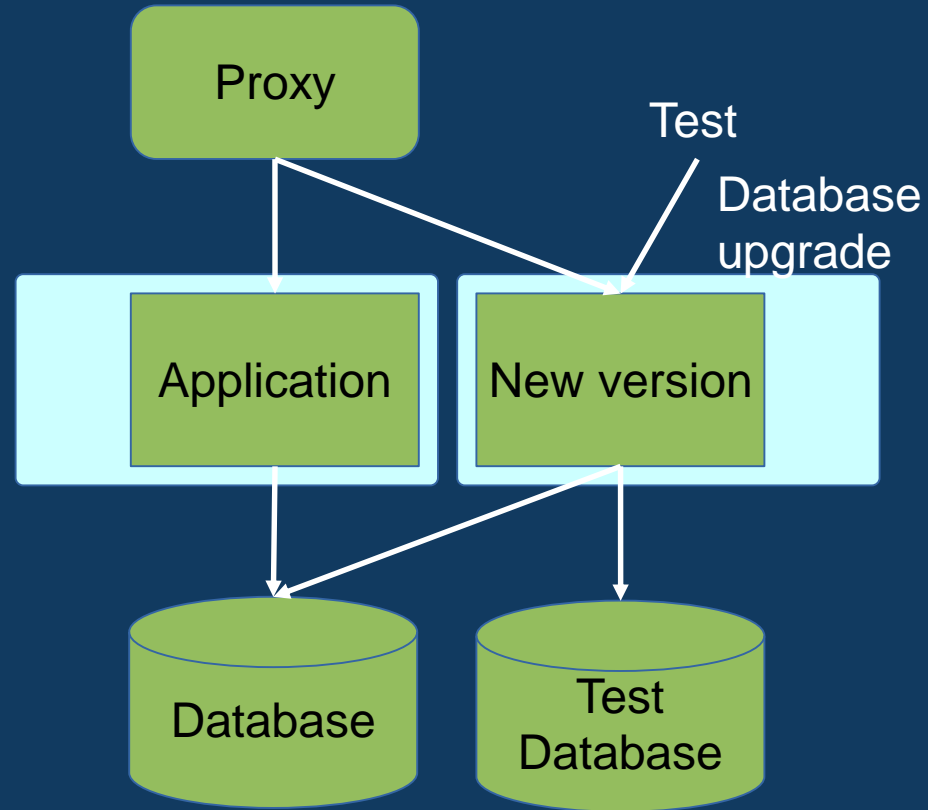
```
EXPOSE 8080
```

```
CMD catalina.sh run
```

Deployment pipeline

1. Code check-in to GitHub
2. Build the application
3. Run unit tests
4. Populate database
5. Run integration tests
6. Upload image to repository
7. Deploy from repository

Blue/green deployments



Container management tool



Prod 1 CPH

STACKS

CATALOG

INFRASTRUCTURE

API



"reportnet" Stacks

Add Stack

Add from Catalog

Sort By: State Name

		cdr-eionet	Add Service	9 Services	12 Containers		
		cdrsandbox-eionet	Add Service	9 Services	10 Containers		
		converters-eionet	Add Service	5 Services	6 Containers		
		cr-eionet	Add Service	3 Services	3 Containers		
		dampos-eionet	Add Service	2 Services	2 Containers		
		dd-eionet	Add Service	3 Services	3 Containers		
		mdr-eionet	Add Service	8 Services	8 Containers		

Stack overview



Prod 1 CPH

STACKS

CATALOG

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API



Stack:

cdr-eionet

Add Service

Active

Tags: reportnet

Active	apache ⓘ	Image: eeacms/reportek-apache:1.0 Ports: 80, 443	Service	1 Container	
Active	cron ⓘ	Image: eeacms/reportek-cron:1.1	Service	1 Container	
Active	haproxy ⓘ	Image: eeacms/haproxy:1.6-1.2	Service	1 Container	
Active	instance ⓘ	Image: eeacms/reportek-cdr:3.9.1	Service	4 Containers	
Active	localconv ⓘ	Image: eeacms/reportek-local-converters:1.3	Service	1 Container	
Active	maintenance ⓘ	Image: busybox	Service	1 Container	
Active	redis ⓘ	Image: redis:3	Service	1 Container	
Active	zeoserver ⓘ	Image: eeacms/reportek.zeoserver:1.0.3	Service	1 Container	
Active	zodbpack ⓘ	Image: eeacms/reportek-cron:1.1	Service	1 Container	

Container statistics



Container: ○ cdr-eionet-apache-1 ▾

○ Running ○ ⋮

Stack/Service:
cdr-eionet/apache

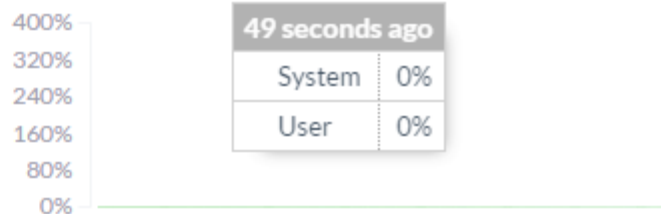
Host:
prod1-cph-16 📄

Container IP:
10.42.83.47 📄

Docker ID:
1bd1c9bdce8a... 📄

Image:
eeacms/reportek-apache:1.0 📄

CPU ○ System ○ User



Memory ○ Used



Network ○ Transmit ○ Receive



Storage ○ Write ○ Read



- Ports
- Command
- Volumes
- Networking
- Security
- Health Check
- Labels
- Scheduling

IP Address Public on Host Private in Container Protocol

