

Von Ärzten, Piloten und Flugzeugen

Was Softwareentwicklung von anderen Branchen lernen kann



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**Software ist
überall**

**... und wir sind
sehr weit weg
von perfekt**



**“Da müssen wir
nichts groß
dran ändern”**



**“Da müssen wir
nichts groß
dran ändern”**



**Wie vermeiden
andere solche
Fehler?**

CAUTION

ANALOGIES AHEAD

PROTECTIVE HEADGEAR MUST BE WORN IN THIS AREA



Piloten





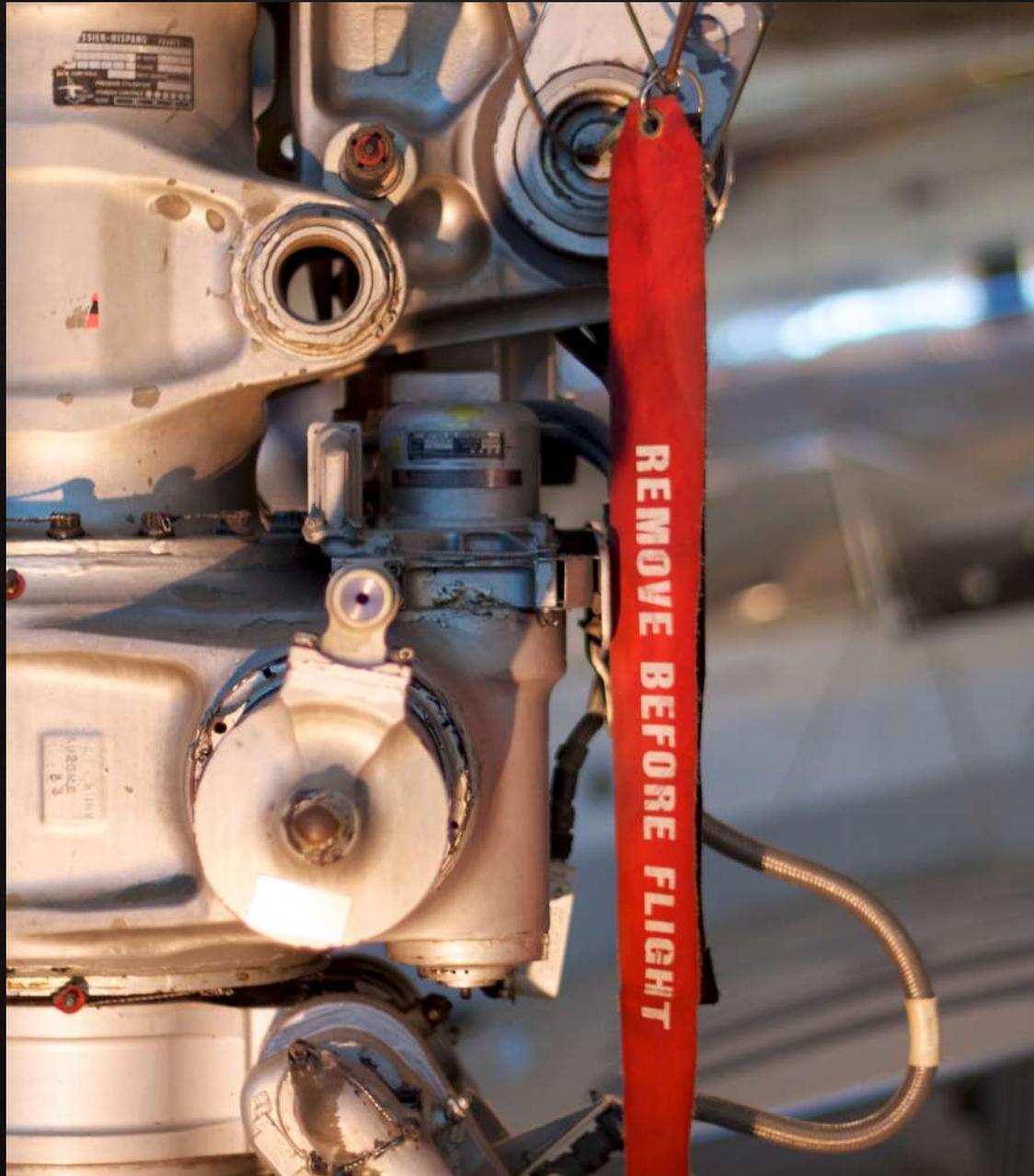
**Keine
Übermenschen
sondern gute
Vorbereitung**

“A superior pilot uses his superior judgment to avoid situations which require the use of his superior skill.”

(Frank Borman)



**Klare und
präzise Sprache**



**Klare
Verantwort-
lichkeiten**

BEFORE TAKEOFF

RECALL ----- CK
FLIGHT CONTROL ----- CK
FLAPS ----- GREEN LT
STAB TRIM ----- __ UNITS
COCKPIT DOOR ----- LOCKED
TAKEOFF BRIEF ----- REVIEWED
-----CLEARED FOR TAKEOFF-----

START SWS ----- ON
TRANSPONDER ----- ON

AFTER TAKEOFF

AIR COND & PRESS ----- SET
START SWS ----- OFF
LDG GEAR ----- UP & OFF
FLAPS ----- UP. NO LT

DESCENT-APPROACH

ANTI-ICE ----- AS REQD
AIR COND & PRESS ----- SET
ALTM & INST ----- SET & XCK
N1 & IAS BUGS ----- CK & SET

LANDING

START SWS ----- ON
RECALL ----- CK
SPDBK ----- ARMED, GRN LT
LDG GEAR ----- DN 3 GRN
FLAPS ----- GREEN LT

Checklisten und Procedures

- ✓ Ensure the new build and deployment configurations are available in the `master` branch of `borg`
 - ✓ Tag latest `master` branch commit with the old Heroku based build and deployment configuration with `pre-aws-migration` to allow easy rollback to old deployment in case we encounter a blocker after migrating to AWS.
 - ✓ Merge branch `feature/deploy-at-aws` to `master`
 - ✓ Wait for CircleCI build of `master` branch to complete successfully
- ✓ Create backup call list manually before starting the migration
 - ✓ `2020-09-10T16:37:50.531028582Z 2020-09-10T18:37:50.530+0200 [DEBUG] Stored file 20200910-1837_production_backup.7z into Dracoon as child of: 3184 => 20200910-1837_production_backup.7z`



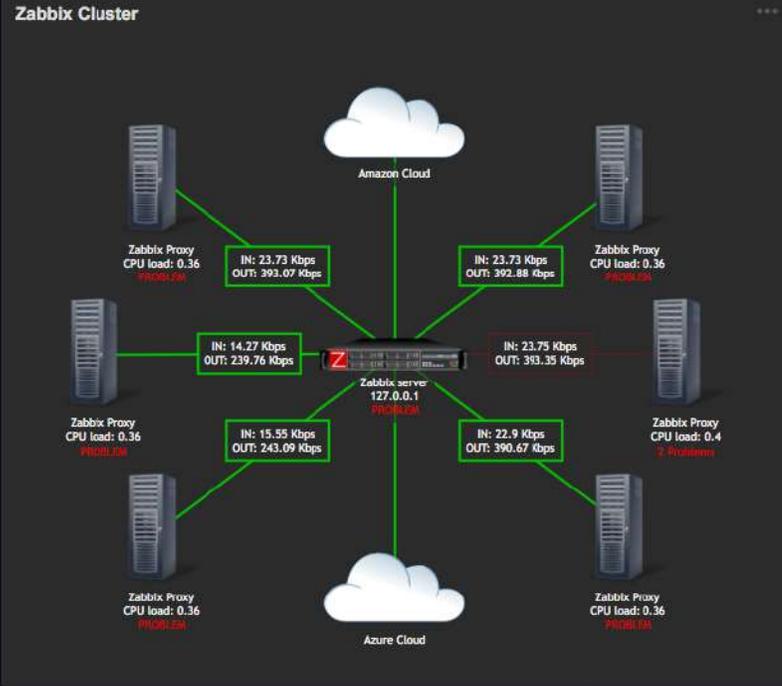
Cockpit

Zabbix Global View

Edit dashboard  

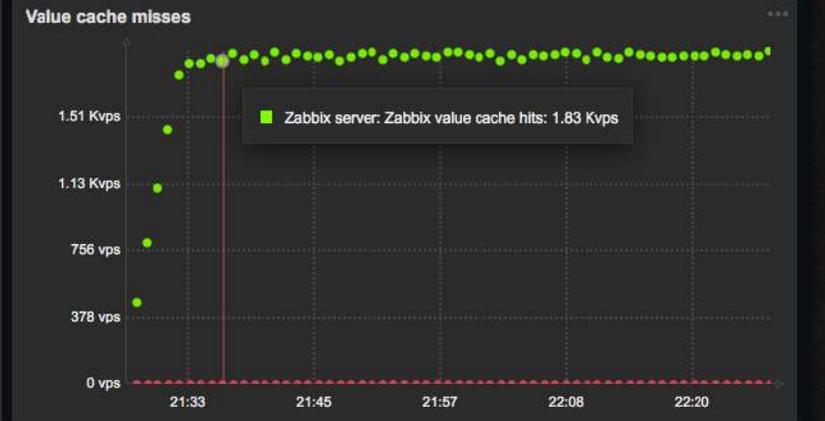
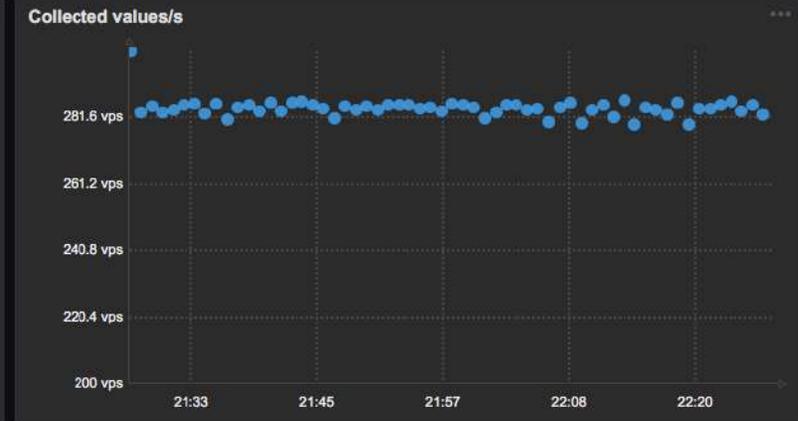
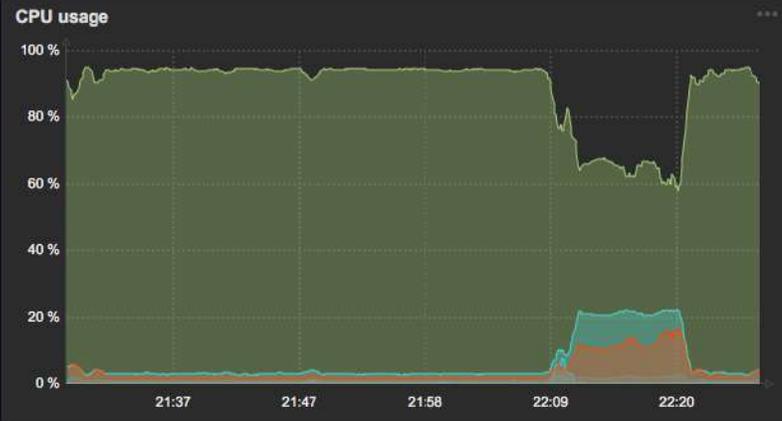
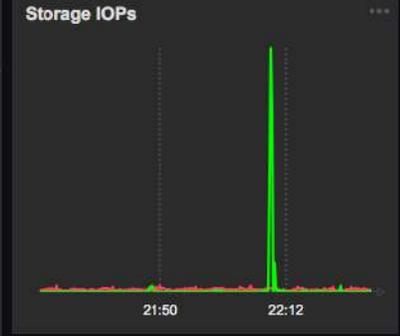
All dashboards / Zabbix Global View

Zoom out Last 1 hour 



Detected problems

Host group	Disaster	High	Average	Warning	Information	Not classified
Cloud/AWS			1	1		
Cloud/Azure			1	1	1	
End user services			8	5	1	
HPC Cluster			29	27	1	
Internal Infrastructure		2	43	41	3	
R&D Lab1						
R&D Lab2			1	1		
Region/Australia			1	1		
Region/Brazil						32
Region/China		1	1	1		
Region/Europe						
Region/Japan			5			
Region/USA			3	1		
SAP HANA Infra			1	1	1	
Zabbix infrastructure				1		





Plan B



**Plan B
... und C**



**Plan B
regelmäßig
trainieren**



Keine Panik!

Flugzeugmechaniker





Die richtigen Werkzeuge



**Tätigkeiten
sichtbar machen**



Entscheidungen dokumentieren



**Daten sammeln
und auswerten**



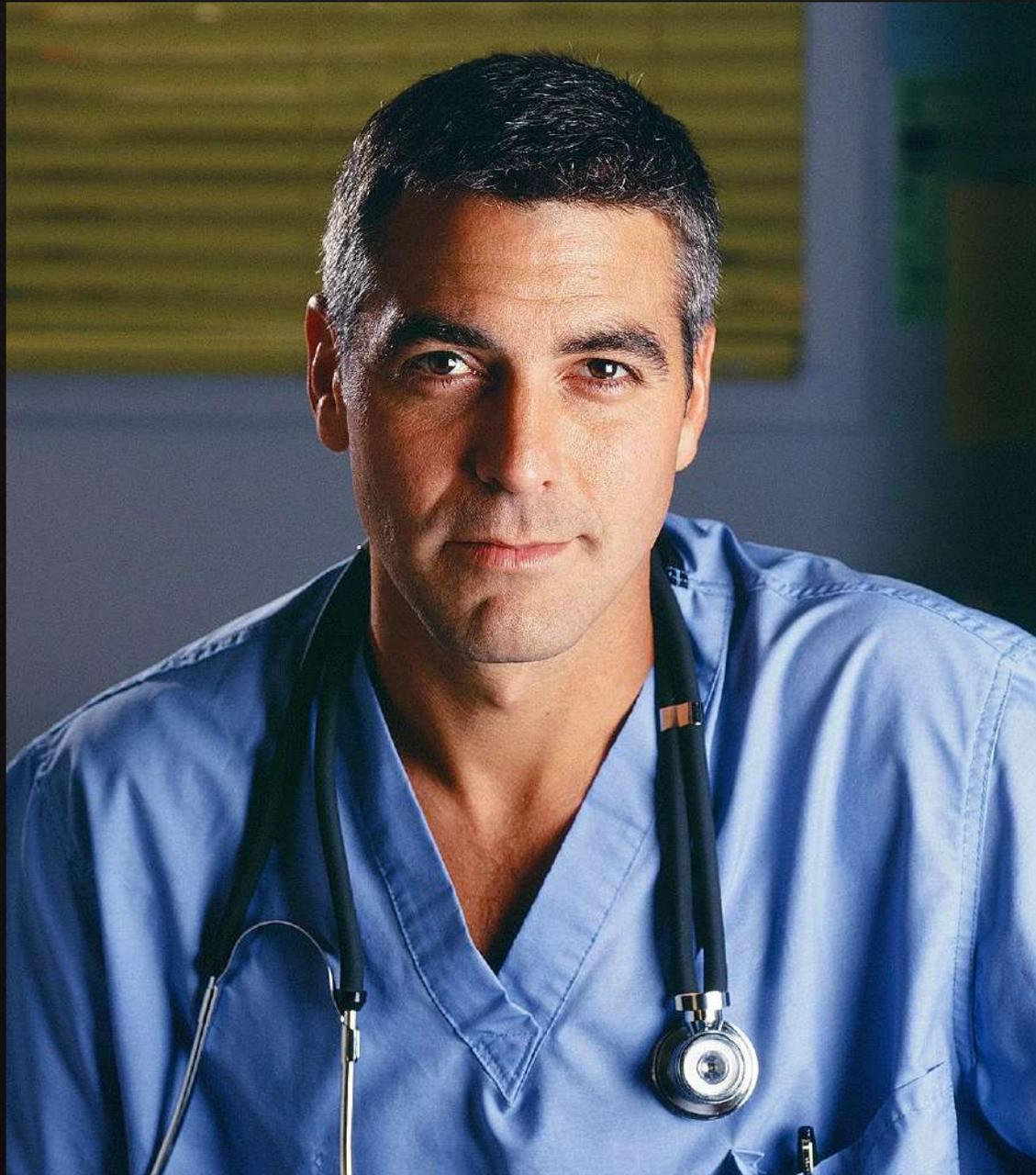
Erstklassige Fehlerkultur



**Ruhe und
Besonnenheit**

Ärzte





**Beruf
vs.
Berufung**



**Empathie für
den Patienten**



Ausführliche Vorbereitung



**Ruhe und
Besonnenheit**



**Komplett
unterschiedlich
sind wir also
gar nicht**

Von Ärzten, Piloten und Flugzeugen

Danke!



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