

COMPUTING ENGINEER

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IT/CF/FPP

Massimiliano Fantuzzi

WHO

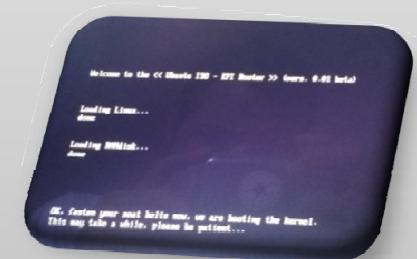
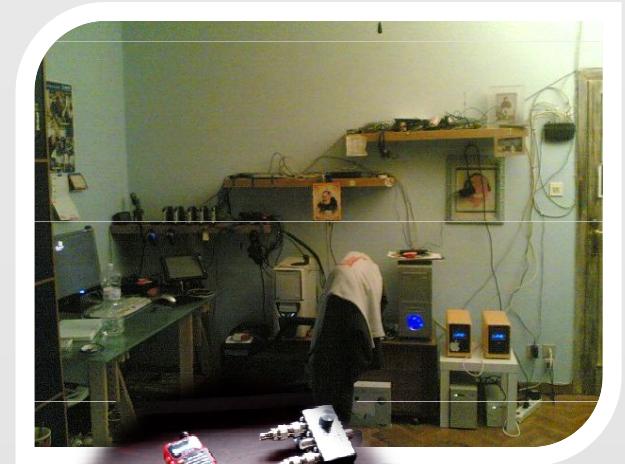
Passionate of HW & SW: expectations, showstoppers

Linux ARM since 2005, kernel 2.2, windows: 3.1, Oracle 8

Follower of IT industry: products, trends, security

Open-source, translations, Hackathons

HAM radio, RF, TRX, electronics & code
(EMI, GND, PUE, TDP, PEP, etc)



ORACLE



 **redhat**

 **CentOS**

 **debian**

BACKGROUND, INSPIRATION

12 years on Linux, virtualization, storage, security, networking

HTTP: 0.9/1.0/1.1, H2, QUIC (the UDP HTTP/3), reverse proxies, DNS-over-HTTP -> **IETF**

Efficiency, resiliency, continuity, consistency, licensing vs **opensource** *

Domotics, sensors, IC, soldering, fun

Reports from users, colleagues, customers, managers:

- Autonomous, precise, creative (i.e. BCTT tool, ELK)
- Improved performance, improved level of service
- Simplified management & resource planning
- Understanding of specs, interaction with customer/peers, visualize results
- Spotting bugs, digging into problems + security, strace processes *
- Collaborative, positive attitude

Motivated:

to **contribute to evolution of infrastructure** and tools

to **maintain high quality standards** and **reduce costs of operation** and deploy

to **manage HW lifecycle, seek innovation** through POC, market watch, coordination, testing

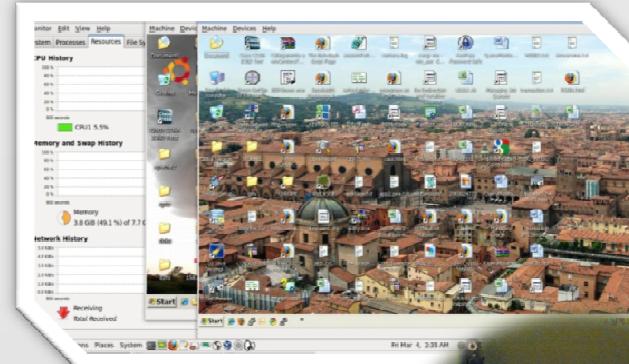
to reuse specific CERN knowledge already acquired (LANDB, Service Portal, outlets, EDH, Ixc, RP ..)



SOFT SKILLS, ABILITIES, CARE

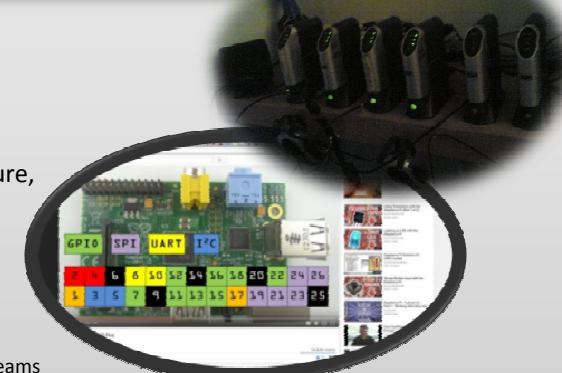
I do ..

- .. **support requests**, precisely, timely, with documentation
- .. **baselining & sampling**, in order to measure infrastructure performance
- .. **problem solving** with follow-up, dissect bugs & inconsistencies
- .. change management, roll-out, burn-in, clusterisation, migrations, DR
- .. Keep integration and automation in mind
- .. **communication**: slack, evernote, jira, wiki, talks, demo, conferences



I propose ..

- Architecture, **engineering** and procurement of **IT solutions**:
 - With understanding of the big picture, costs, vs needs, accounting for evolution/growth
 - Scheduling and prioritization, extra care, parallel runs, interoperability tests
 - By collaborating, mediate, easening processes and fostering collaboration
- Manage coexistence of **legacy and innovative solutions**, alongwith proper backup infrastructure,
- Surveillance of smooth operation** of IT environments & services



I solve ..

- Common and less common **challenges in designing and operating** of ICT systems
 - by **curiosity**, with the help of previous **experience** and a bit of luck, patience, stubbornness, **help** from other teams
 - through analitic skills, visualization, plotting, spotting trends, interviewing users, stakeholders, **abstracting issues**
- Urgent problems with **troubleshooting & debug techniques**. Solve recurrent problems with sanitisation or **automation** practices
- Common conflicts by mediation of interests, peacekeeping, resulting in **positive and productive work atmosphere**



Apache, NGINX, Squid, HAProxy, load balancing, debug, HTML, PHP, SQL, storage, kernel

Hardware commissioning, assembly, replacement, troubleshooting POST, SMART, RAID, EFI, interlink



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... CERN FITS MY CAREER PATH

Past:

- ✓ Younger, more time and energy upfront, less relations/stability, curiosity to see Europe
- ✓ Able to learn fast, always curious. An advantage for my personal development, at the price of literally changing countries/cities, friends, habits...

Present:

- Shift in rythm, plans
- Still creative, still full of enthusiasm, still learning

Future:

- Plan to stay in Geneva. Amazing place to be !
- Stability, family, more work
- Re-join a vast and diverse organisation, help delivering excellence and efficiency

WHY DO I SEE MYSELF @ IT/CF/FPP

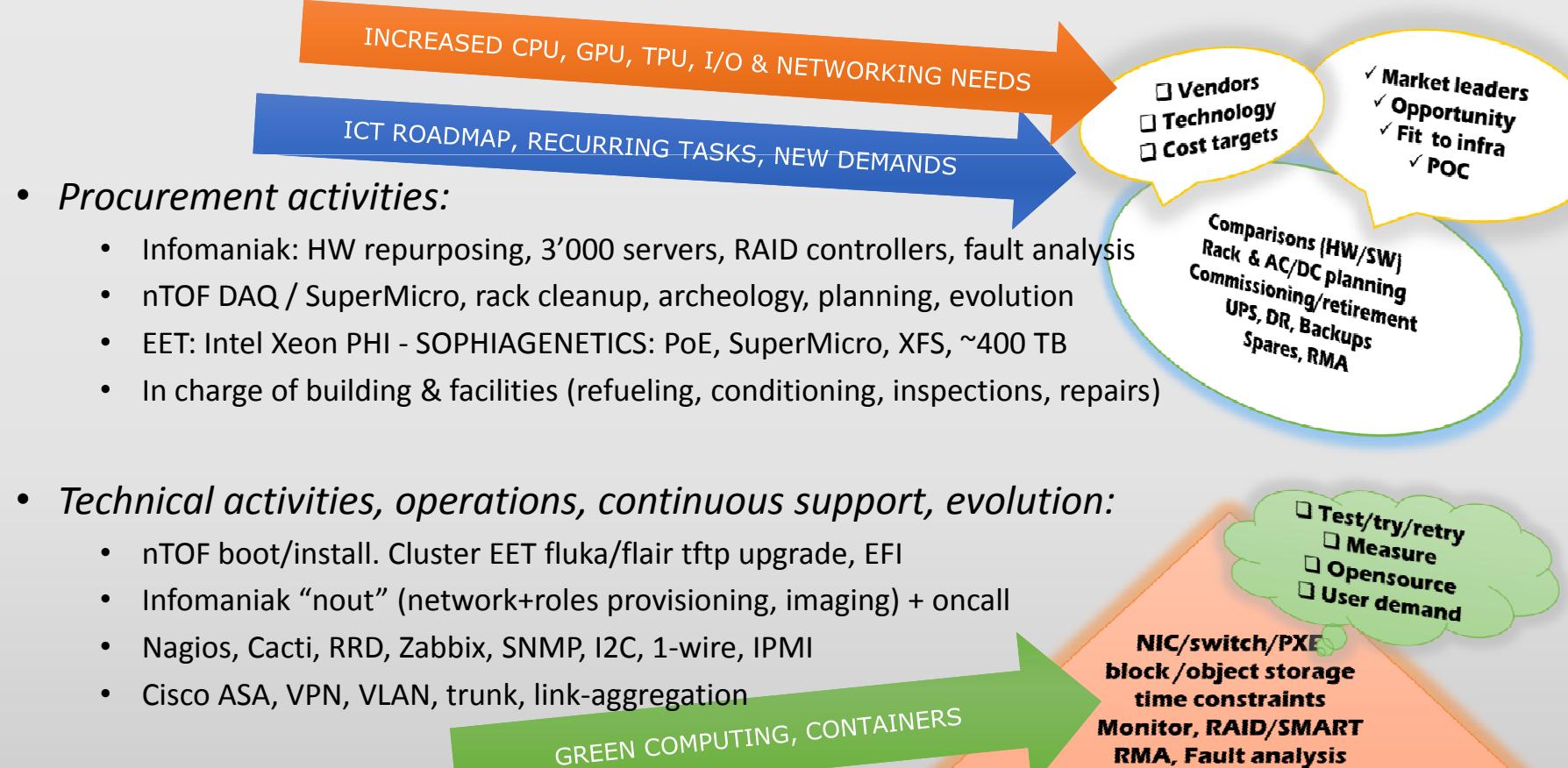
- Expert in setup/operation of (servers) DHCP, BOOTP/TFTP/PXE, IPMI/SOL/DRAC/ILO/BMC, BIOS/EFI, RRD/SNMP and other softwares and protocols (in CERN usage context too) + doc doc doc
- Interested into procurement activities: orders, RMA, software support, upgrades, repairs, firmware
- Support high-speed computing, storage & data acquisition, work closely with vendors
- Familiar or proficient on Bash, PERL, SQL, C, PHP, Java. Certified net/db/linux admin
- Technical advisory: polite, timely follow-up, able to understand user's need/frustration, proactive, vision
- Able to work within multiple SLA, standards, cultures, habits, architectures, business targets...
- Available for day & night operation on DELL, SuperMicro, HP, Cisco hardware. SFP, LAG, SAS

In a sense, I imagine that the proposed role contains all of these challenges, and probably more 😊

** A small minus on Python knowledge: few experiences in scripting (DNS, I2C, PIGPIO, radio, puppet)*

** A plus: deep technical understanding, attention to details, knowledge of protocols, field experience*

RELEVANT EXPERIENCES/PROJECTS



GOALS FOR 2018/2019

- Get accustomed with CERN best practices, vendors, policies, datacenters, experiments, groups, budgets
- Continue *market watch*, use *inventory* tools, recycle or decommission of *assets*
- *Collaborate* in planning interventions, handling exceptions, boosting performances, feasibility studies, evaluation & assessment
- *Contribute* to Problem, Incident & Change management, documentation/KB
- *Take part* into Opencomputing, OpenLAB, Technology Evaluation Platform (TEP)

Five years is a long time, time to: plan, delivery, solve, support, identify patterns in defects, follow the evolution and provide optimization of HW, SW and costs

- *Participate* in CERN life, make new friends
- To keep learning, to keep listening, to keep being responsible, sportive

How many people currently work in the technical team ?

Which and how many HW sensors are currently deployed , which are the benefit ?

More details on INTEL collaborations ?

And an example of Facebook Opencomputing ... and Google

?

