

Site Report GSI Oxford Spring 2015

Walter Schoen, GSI

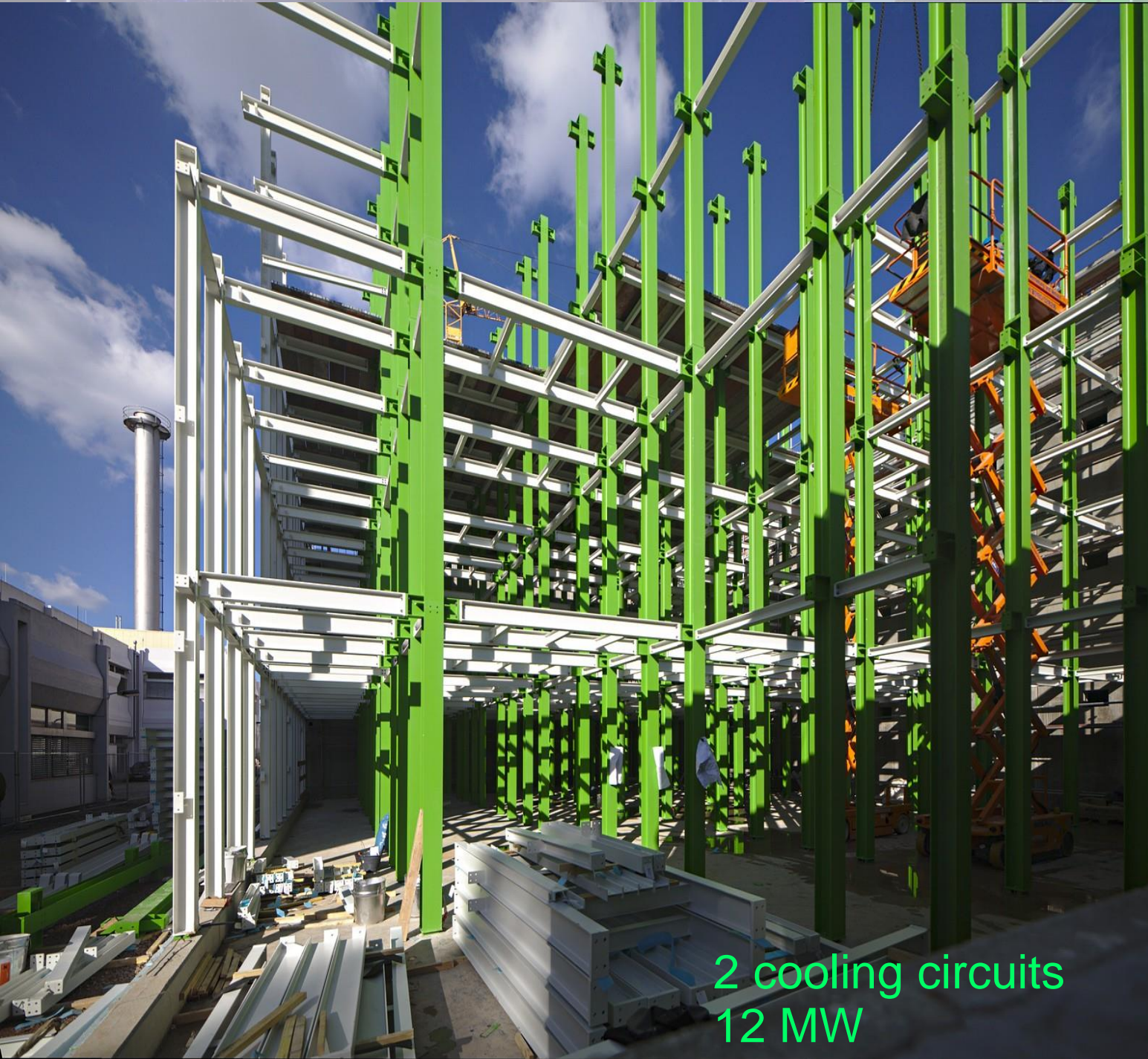
 Oxford
Physics



HEPIX SPRING 2015 WORKSHOP

- Construction of „Cube“
- No 1 Green 500 SC
- New clusters
- New Tools

The Cube: Start of construction: Nov 2014



6 floors –
each 128 racks 47 U
768 Racks
=> 36.000 U total

„3d“ cube cabling
=> cable length!

2 independent
power lines
=>no waste
of energy by UPS

passive cooling by
„free fall coolers“

PUE<1.1

Connection to new
Buildings for cooling in
Summer and heating in
Winter.

2 cooling circuits
12 MW



**Operation 2015: Level 5 +6:
Hera + NYX, Prometheus + Kronos
L-CSC**

No 1 Green500 Supercomputers: L-CSC, GSI Darmstadt (Design: FIAS)

Supercomputer
for Lattice QCD
IB-> HERA lustre cluster

- About 1 Petaflop
- \$ $1.7 \cdot 10^6$
- Xeon E5 2690 v2
- AMD FirePro S9150
- IB network
- 200kW
- Location: Mini Cube



Old & new GSI Clusters:

L-CSC: Lattice QCD, IB connection to HERA

Prometheus : production General purpose, IB to HERA

Kronos: first test users, General Purpose, IB to HERA (IB to NYX)

HERA: production lustre 1.8, MDS, EXT4, IB, hardware Raid

NYX: testing, lustre 2.5, clustered MDS, ZFS – zpool software RAID

Lustre@GSI: about 20 Petabyte gross capacity, about 10.000 disks

Planned for FAIR: 140 PByte lustre (net capacity)

300.000 cores

Work to do:

- Testing (electricity + cooling) of the „Cube“ in October
- New Components for NYX and Kronos in Cube (Dezember)
- Migration of
 - services and
 - HPC Clusters from „old“ Data Center & Mini Cube => Cube

=> tight time schedule, lots of work

Redmine: A tool for project Management

Projects

[+ New project](#) | [View all issues](#) | [Overall spent time](#) | [Overall activity](#)

★ HPC

Asset Management

Cluster

Grid

Icarus

Kronos

Prometheus

Virgo

★ Common Services

★ Monitoring

★ Data

★ Hera

★ Nyx

Data Center

GreenITCube

Organisation GC

Projects

View closed projects

Preferences

- Show projects' menu
- Show projects' description
- Show projects' progress
- Show only for my projects

Recently viewed projects

[Common Services](#)
[HPC](#)
[Linux](#)
[IT-Security](#)

- OpenSource
- Issue Tracking, Gantt-Charts, Projects, Bug-Tracking, Documents, Wiki , Repository

- Maintained by HPC
- Used by B-IT, HPC, IT-Security, HR

README (show +)

gsi-sys-cookbook @ master

Statistics | Branch: | Tag: | Revision:

Name	Size	Revision	Age	Author	Comment
attributes		2cce179a	8 days	Matthias Pausch	Use pam-limits as default
documents		edf7a3b0	over 1 year	Victor Penso	some words about unattended-upgrades configuration
files		08f8d2f5	29 days	Christopher Huhn	Forgot to add file - workflow sucks - closes #465
recipes		771ca1df	3 days	Christopher Huhn	Notifications for sys_apt_conf broken (refs #575)
templates		e304ac41	4 months	Christopher Huhn	Add ONA/dcm recipe
test		de32169a	15 days	Dennis Klein	multibus is the better default, refs #100
_.gitignore	155 Bytes	a10ada79	about 1 month	Dennis Klein	setup test environment

Repositories

- gsi-sys-cookbook
- data-bags
- fai-cookbook
- fai_config
- gsi-admin
- gsi-fai-cookbook
- gsi-scripts
- packer
- roles
- sys-cookbook

Recently viewed projects

- Common Services
- HPC
- Linux
- IT-Security

Issues

Filters

Status Add filter

Options

Apply Clear Save

#	Tracker	Status	Priority	Category	Subject	Assignee	Start date	Due date
385	Feature	Feedback	Low	Chef	Rollen unsortiert in _Edit Role Run List_ im Chef Web-Interface	Linux	28.01.2015	
290	Bug	Resolved	Normal	FAI	Installation ohne Recommendations	Christopher Huhn	13.01.2015	

Thank You!

