Happyface 4 – status & plans

DCMS computing team meeting | 8 March 2022

Daniel Savoiu on behalf of the Happyface developers
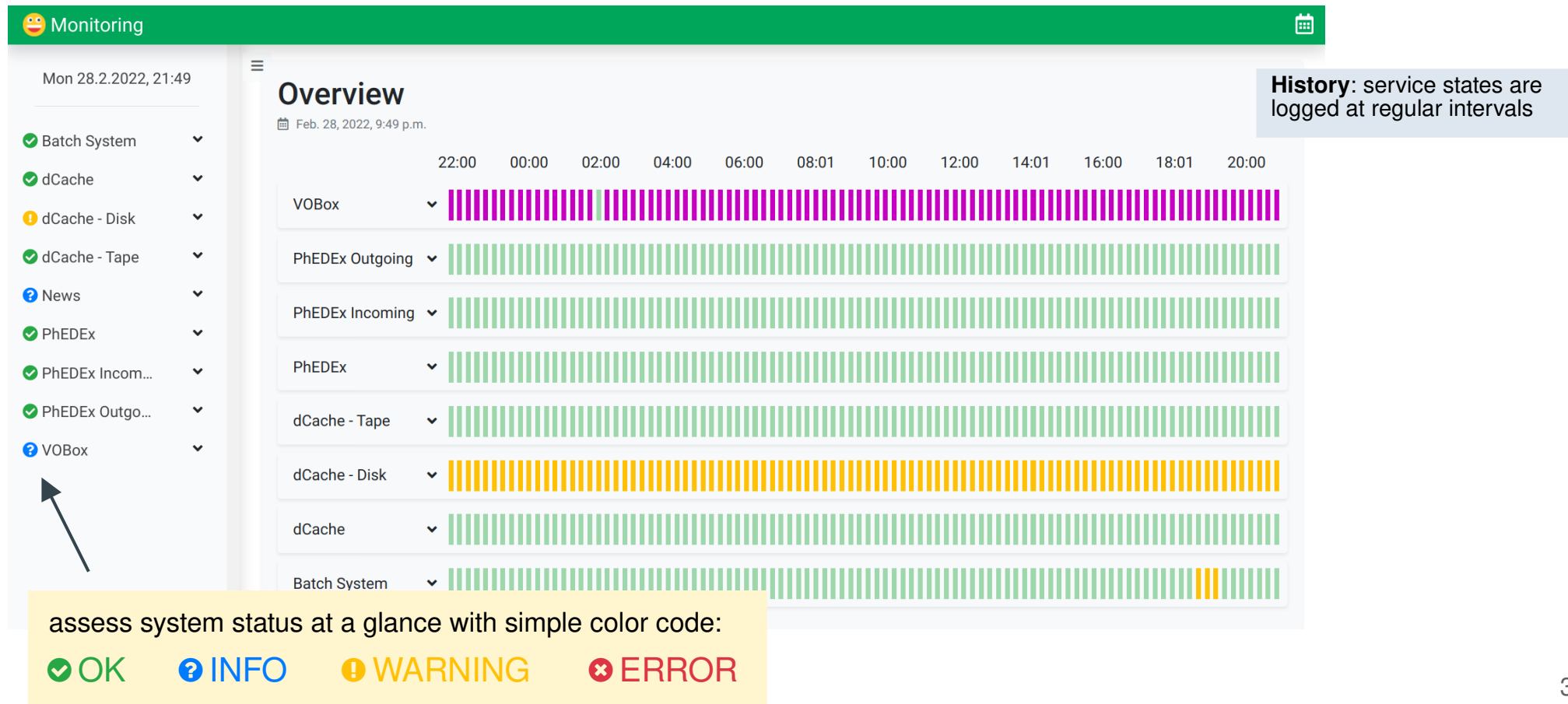S. Brommer, N. Faltermann, A. Gottmann, DS, C. Winter

Happyface

- web-based tool for meta-monitoring computing infrastructure
  - collect information from multiple different data sources
  - aim to provide quick overview of the status of systems

- version 4 → completely new code base based on modern technologies
  - main application coded in Python using the *django* web framework
  - modern, responsive front-end using HTML5 + CSS3 + various JS libraries
  - modular design separating *core* functionality from extendable system of *analysis modules*

UI overview

Happyface instance deployed at ETP for monitoring the status of CMS services at GridKa

😃 Monitoring

Mon 28.2.2022, 21:49

✅ Batch System
✅ dCache
⚠️ dCache - Disk
✅ dCache - Tape
❓ News
✅ PhEDEx
✅ PhEDEx Incom...
✅ PhEDEx Outgo...
❓ VOBox

Overview

📅 Feb. 28, 2022, 9:49 p.m.

History: service states are logged at regular intervals

22:00 00:00 02:00 04:00 06:00 08:01 10:00 12:00 14:01 16:00 18:01 20:00

VOBox
PhEDEx Outgoing
PhEDEx Incoming
PhEDEx
dCache - Tape
dCache - Disk
dCache
Batch System

assess system status at a glance with simple color code:

✅ OK   ❓ INFO   ⚠️ WARNING   ❌ ERROR

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Analysis modules

raw monitoring data processed for extracting status information

😃 Monitoring

Mon 07.3.2022, 9:00

- ⚠️ Batch System ⌄
  - ✅ Batch System Completed Jobs
  - ✅ Batch System Job Status
  - ✅ HammerCloud Inferface
  - ⚠️ SAM Status of Compute Elem...
- ✅ dCache ⌄
- ⚠️ dCache - Disk ⌄
- ✅ dCache - Tape ⌄
- ❓ News ⌄
- ✅ PhEDEx ⌄
- ✅ PhEDEx Incom... ⌄
- ✅ PhEDEx Outgo... ⌄
- ❓ VOBox ⌄

✅ HammerCloud Inferface
📅 March 7, 2022, 9 a.m. More analysis informations

Site	TestID	Submitted	Running	Completed	Failed	Killed	Total	Effiency
T1_DE_KIT	98418	91	5	126	0	0	222	1.0

✅ OK
(simple threshold)

Data source: *HammerCloud* status page
http://hammercloud.cern.ch/hc/app/cms/

⚠️ SAM Status of Compute Elements
📅 March 7, 2022, 9 a.m. More analysis informations

("weakest link")

⚠️ WARNING

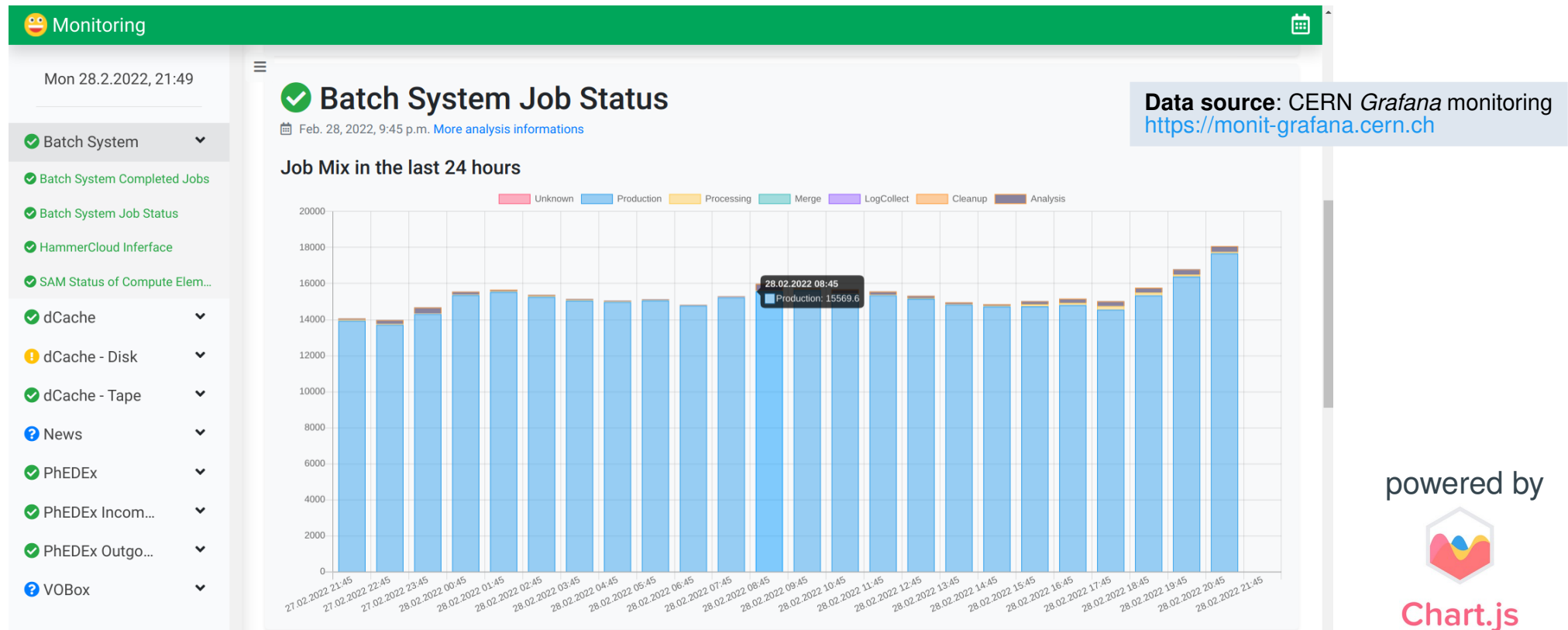| Type	Name	Status
HTCONDOR-CE	htcondor-ce-1-kit.gridka.de	Warning
HTCONDOR-CE	htcondor-ce-2-kit.gridka.de	Ok
HTCONDOR-CE	htcondor-ce-3-kit.gridka.de	Ok
HTCONDOR-CE	htcondor-ce-4-kit.gridka.de	Ok

Data source: CERN *Grafana* monitoring
https://monit-grafana.cern.ch

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Plotting modules

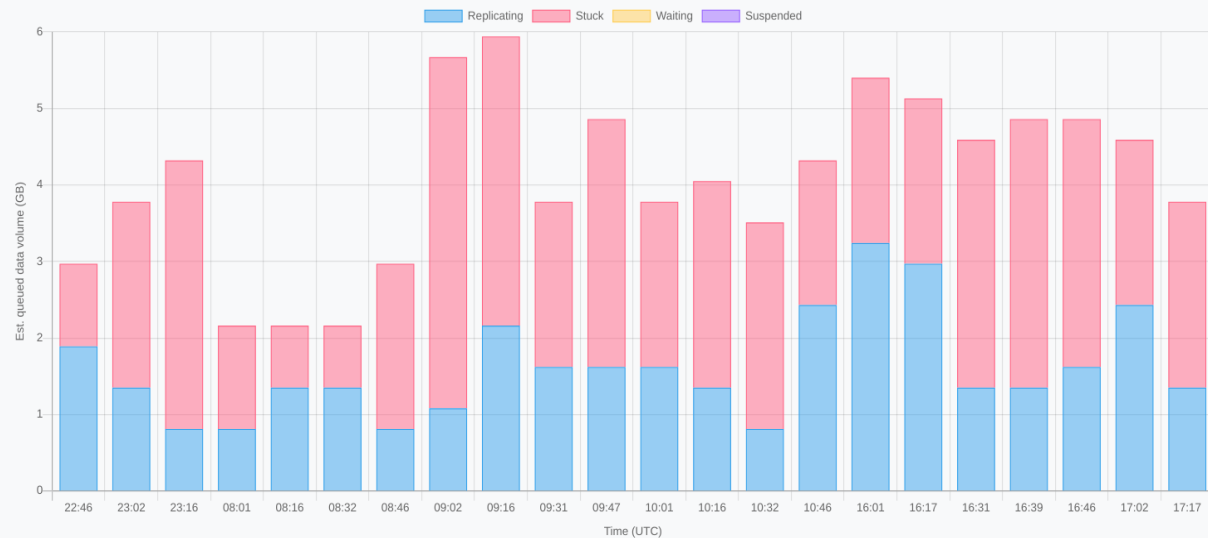raw monitoring data processed for building interactive graphical representations

Ongoing development – integration of Rucio

replacement of old PhEDEx modules with new data transfer monitoring based on Rucio

Data source: *Rucio* via Python client
https://cms-rucio-webui.cern.ch/

- authentication via X509 user proxy
- certificate bundle from CVMFS required
- long term → move to token-based authentication

Summary & plans

- development of Happyface meta-monitoring tool ongoing at KIT
  - small but active team of developers
  - recent work on implementing data transfer monitoring with Rucio
  - larger topic is transition to token-based authentication

- interested in collaboration with other grid sites
  - plan to work with UHH for setting up Happyface 4 instance + testing
  - interest in Aachen?

- long-term aims:
  - make code publicly available (some things still to clarify → hosting, CI setup, secrets...)
  - collaboration beyond CMS, e.g. with ATLAS sites