

# Welcome to the IT Technical-Users Meeting

- Very rich agenda:
  - General IT Services Update
  - Linux Future
  - e-groups
  - CERNPhone
  - CERNBox
  - Mattermost
- Questions at the end of the talks, we will also keep an eye on the chat

# Brief updates on IT Services

Xavier Espinal

ITUM Chair

V.6



Information Technology Department

# Conference rooms

- New or refurbished rooms:

- 30/7-010
- 30/6-019
- 865/1-D17
- 222/R-001
- 32/S-C22
- 561/R-001
- 513/R-068
- **6/2-024**



# Videoconference (1/2)

- **Zoom:**
  - In production since 7th December 2020 [[more info](#)]
  - Data stored in EU data centers
  - Several options added:
    - Cloud recording
    - Indico integration
    - CERN meeting rooms integration
    - Automated live transcription of meetings
    - CERN call-in phone number (73020)
- **Recorded training available:**  
<https://cds.cern.ch/record/2749826>

# Videoconference (2/2)

- Zoom:
  - The email address of all CERN Zoom accounts has been modified to the following format: [login]@cern.ch
    - To avoid clashes with users whose primary email address at CERN is the one of their home institute
  - We will soon require users to **sign in with SSO** if their email address belongs to the @cern.ch domain (\*provided Zoom fixes an issue with this feature)
  - **Testing** of **Webinar** functionality by our user community is **encouraged** so we can get some stats to dimension the number of licenses we may need
  - [Bulletin article](#): Zoom becomes the official video conference system at CERN | CERN (home.cern)
- Vidyo was **retired** on February 1st

# Indico, mattermost and e-mail

- **Indico**

- New 3-hours online training: "Learning Indico"
- Indico v3 coming in April
  - categories can host sub-categories and events, renovated user search interfaces, new search engine and interface, user pictures/avatars visible in many more places, python 3

- **Mattermost**

- Owners will be able to mark channels as professional or non-professional (coming in March)
  - Data retention durations will depend on the marking
- On new SSO since November

- **email**

- Kopano pilot shutdown
- Dovecot/OpenXChange pilot ongoing

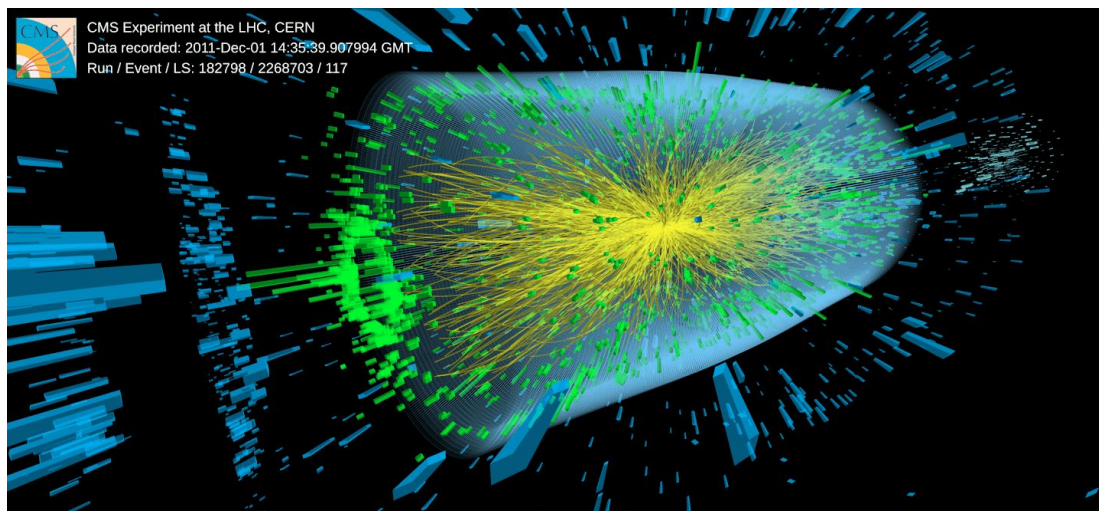
# Authorization and authentication

- **New SSO**
  - Pages behind SSO can be embedded in iframes from domains at \*.cern.ch
  - Compromised password checks
- **User portal**
  - Password management: from the 22nd February, password changes (both for the CERN password and the EDH one) will be done through the new users' portal
    - <https://users-portal.web.cern.ch/>
    - <https://cern.service-now.com/service-portal?id=outage&n=OTG0061790>

# CERN

## Open Data

- CMS released **heavy-ion physics data samples** from 2010 and 2011
- First batches of heavy-ion physics data from CMS
- Over 214 TB of data
- Six Pb-Pb datasets
- Eight p-p reference datasets
- accompanying software examples



CMS Experiment at the LHC, CERN  
Data recorded: 2011-Dec-01 14:35:39.907994 GMT  
Run / Event / LS: 182798 / 2268703 / 117

opendata CERN

Search

Help About

### HIAllPhysics primary dataset in RECO format from the 2.76 TeV Pb-Pb run of 2010 (/HIAllPhysics/HIRun2010-ZS-v2/RECO)

/HIAllPhysics/HIRun2010-ZS-v2/RECO, CMS collaboration

Cite as: CMS collaboration (2020). HIAllPhysics primary dataset in RECO format from the 2.76 TeV Pb-Pb run of 2010 (/HIAllPhysics/HIRun2010-ZS-v2/RECO). CERN Open Data Portal. DOI:10.7483/OPENDATA.PRIMV2.RECO

Search Browse HIAllPhysics CMS CERN.LHC

#### Description

HIAllPhysics primary dataset from the 2.76 TeV Pb-Pb run of 2010.

The list of validated runs, which must be applied to all analyses, either with the full validation or for an analysis requiring only muons, can be found in

Validated runs, full validation

Validated runs, muons only

#### Dataset characteristics

75482193 events. 28954 files. 166.0 TB in total.

#### System details

Recommended global tag for analysis: GR\_R\_39X\_V6B-All

Recommended release for analysis: CMSSW\_3\_9\_2\_patch5

opendata CERN

Search

Help About

### Usage example for CMS 2010 heavy-ion data

Bylinkin, Alexandr

Cite as: Bylinkin, Alexandr; (2020). Usage example for CMS 2010 heavy-ion data. CERN Open Data Portal. DOI:10.7483/OPENDATA.PRIMV2.RECO

Software Tools Analysis Workflows Heavy-ion physics CMS CERN.LHC

#### Description

This is an example of the C++ code (and its configuration in Python) needed to extract information from CMS heavy-ion data and write them to a derived dataset. An example analysis routine is provided to illustrate how to analyse data in this derived output file. These instructions are valid to work with 2010 data. Snippets of this software can be used for physics analysis.

The examples, within the code, have in-line comments to make it more understandable and to point potential users to the original information sources. It has been put together compiling the most important pieces of already-available CMSSW software.

#### Use with

Use this with CMS heavy-ion 2010 primary datasets

/HIAllPhysics/HIRun2010-ZS-v2/RECO

/HIAllPhysics/HIRun2010-ZS-v2/RECO

<http://opendata.cern.ch/docs/cms-releases-heavy-ion-data>



# Digital Memory Video digitisation and curation status

set	# of mp4
Received from contractor	7009
Loaded to EOS	7009
Prepared for review	6465
Reviewed and standardized	3998
Loaded to CDS	3528
Still require Review	3011

(as of 31-01-2021)

Title from tapes inventory



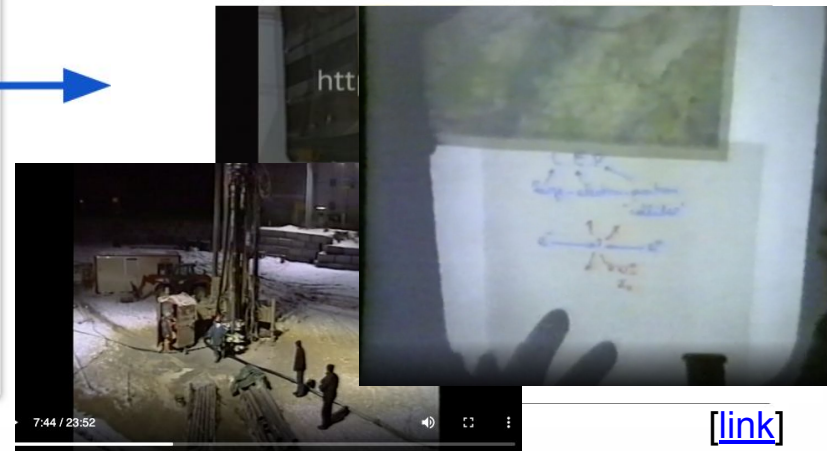
Construction du LEP divers  
(a) Construction du LEP ; (b) jonction du tunnel ; (c) injection dans l'oct. IA2 ; (d) installation de l'expérience DELPHI  
1988 (?) © CERN - 1988 (?) © CERN

Video : Film explicatif de l'expérience que réalise le LEP

Type : Movie - Accelerators - Language: fre  
With : Manfred Buhler-Brooklyn

Available video(s): CERN-VIDEO-T-0004  
ACCESS is PUBLIC

-Video-2273002 view: [Large](#) [Small](#) [Normal](#)



[\[link\]](#)

# Oracle database services

- The development database called DEVDB11 (running Oracle version 11.2.0.4) will be soon **decommissioned**
  - Upgrades to recent Oracle versions (18c and 19c) almost completed
- New development databases called DEVDB18 and DEVDB19 are **available** for your developments accounts
  - Please request them through the Resources Portal ([more details](#))
  - Please open a SNOW ticket to Oracle support if you need to copy the current contents from DEVDB11 to DEVDB18/19

# Cloud Infrastructure: Volume Storage

- Deployment of new Ceph backends allowing to **improve the storage offering for OpenStack virtual machines**
  - Introduced **new high IOPS** volumes on all-SSD backends:
    - io2: 1000 IOPS
    - io3: baseline 500 IOPS, growing with size
  - Ongoing work to expose more control over storage location, to be more consistent with OpenStack availability zones
- Most users still using only volume types standard/io1
  - Please use vault-100/vault-500 for the same performance level (or better) in a different cluster for higher availability
- The current volume types in the critical area are **deprecated**, users will be helped later this year to migrate to new types on critical power

# CERN Tape Archive (CTA) update

- LHC Experiments
  - ATLAS, ALICE, CMS were all migrated from CASTOR to CTA during 2020
  - LHCb migration is taking place, LHCb will be in CTA from 15 March 2021
- SME Experiments
  - CAST was migrated in January 2021 and has started data taking in CTA
  - NA62 will be migrated in March 2021
  - Integration and testing work is ongoing with AMS, COMPASS, DUNE, NA61 and n\_TOF
  - Data from LEP-era experiments will be migrated in next 1-2 months

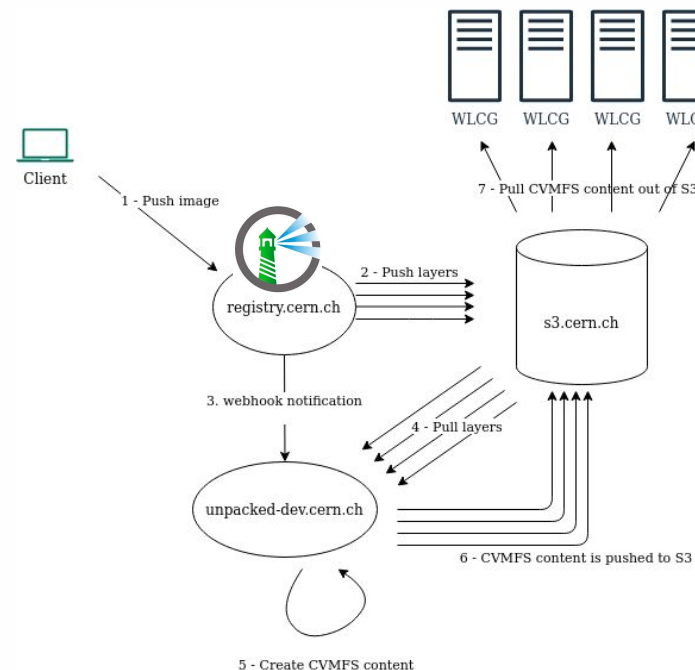
# Shared file systems strategy update

- A working group was formed to have a forward look on the future of shared file systems at CERN
  - The full report is now available: <https://cds.cern.ch/record/2750122>
- Working Group recommendations were presented to IT management:
  - Currently there is no drop-in AFS replacement which can fulfill CERN's need at comparable service cost
  - The OpenAFS community is healthy enough
  - The WG recommends
    - To maintain the AFS service as Linux home directory for lxplus and lxbatch
    - Continue reducing the dependency on AFS, CERN should move out of AFS as a long-term plan
  - Any new solution will require substantial effort from everyone in the community
  - Strategy to be reviewed towards the end of Run-3

# Containers registry

- Need by the CERN community to **run containers at a scale**, enhanced after dockerhub change of policies
  - Also addressing large analysis/production scenarios: many-nodes running the same image
- Several services being used:
  - CVMFS/unpacked**: working very well for experiment *curated* images, also providing deduplication and caching
  - Gitlab** registry: soon facing a scalability problem, no garbage collection and missing vulnerability scans
  - HARBOR** open source registry that secures artifacts with policies and role-based access control: OIDC, quota enforcement, vulnerability scans, artifact signing, proxy cache, non-blocking garbage collections, etc.
- Prototype of Harbor+CVMFS up and running
  - Ingests all images pushed to registry.cern.ch/unpacked-dev
  - Publishes them in /cvmfs/unpacked-dev.cern.ch
  - Integration with GitLab (gitlab-registry.cern.ch) more challenging, some options being considered
- As proof of concept is looking promising, experiments testing
- Progress update will be provided at the next ITUM
- Interested? please contact the team:**

- <https://mattermost.web.cern.ch/it-dep/channels/registry>
- <https://mattermost.web.cern.ch/cernvm/channels/unpackedcernch>



# ElasticSearch Service

- Elasticsearch change of license policy [[more info](#)]:
  - 7.10 is the last release under Apache 2.0, as of **7.11 releases will be under SSPL** (Server Side Public License)
  - Still unclear if we would be allowed to use this
- OpenDistro:
  - Evaluation started back in Autumn last year
  - Using it requires major changes in the service provided
  - OpenDistro is affected by the change to SSPL
  - Moving on, OpenDistro will fork from 7.10 and maintain their own Apache 2.0 code

# Network

- Mobile phones: E-PLMN (network equivalence) feature
  - Users will be able to change CERN SIM cards from ~April and have phones switching more easily between Swisscom and Orange
- Campus Network Upgrade Project: replacing the campus network switches this year
  - Network interruptions expected, generally outside working hours
  - One OTG per building will be created, containing the list of impacted equipment as well as the date of the intervention [[more info](#)]



# MS windows 10 (1/3)

- **End of life** for legacy **MS Edge** web browser
  - Microsoft Edge Legacy desktop application support will **end on March 9 2021**
  - After that date Microsoft Edge Legacy will not receive new security updates
  - Legacy Edge will be automatically removed with April 2021 monthly patches
  - The new Microsoft Edge (based on Chromium) is **deployed on CMF centrally-managed Windows machines** since July 2020 and is available for local admins in CMF

# MS windows 10 (2/3)

- **New build available**
  - Windows 10 build 20H2(2009) in-place upgrade as CMF package
  - **Published in CMF for centrally-managed computers since 20th Feb 2021**
  - Announced to local admins on 20th Feb 2021
  - Windows 10 build 20H2 is now the default Windows desktop OS for network-based installation

# MS windows 10 (3/3)

- 20H2 Migration Plan
  - Windows 10 build 2004 will reach **end of life on 14 December 2021**
  - CERN wide **migration** to build 20H2 starting in **early June 2021** for IT, other departments will follow

# Webservices (1/3)

- **PaaS on a new OpenShift version:**
  - **OKD4 PaaS** will replace current PaaS service based on OpenShift 3 (<https://openshift.cern.ch>)
  - Pilot **started end of February**, details in <https://paas.docs.cern.ch>
  - The pilot can already host production applications
  - Remaining functionality from OpenShift 3 (e.g. EOS integration) will be implemented in the upcoming months
  - Migration schedule for existing OpenShift 3 applications will be announced once the feature set is complete

# Webservices (2/3)

- Foswiki pilot:
  - An alternative to TWiki
  - Compatibility with TWiki
  - Some Markdown support
  - Improved search, navigation and user interface
  - Test instance now installed on OpenShift

# Webservices (3/3)

- Drupal on OpenShift:
  - New infrastructure based on OKD4 in pilot mode from March
    - Changes: Composer based deployment and OIDC plugin
  - Volunteer migrations from April, for non-critical websites
  - Migration of non-critical websites starting in May
  - Migration of critical websites in June
  - Drupal 9 upgrade in September
- For more information contact [web.support@cern.ch](mailto:web.support@cern.ch)

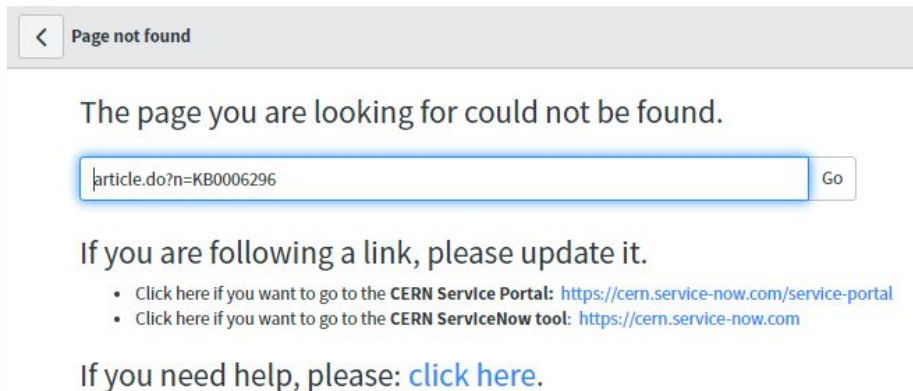
# Service Now (1/2)

- Since last ITUM, six ServiceNow minor releases and one major release (20.10 [upgrade to Paris](#))
  - All details are available in the Service Portal [News page](#)
- It is now possible to define a list of 'Favourites' for KBs, OTGs & RPs, details in the last news [[Link](#)]
- KB articles:
  - A few recent changes:
    - Possibility to **filter by language and browse** the different categories (see [KB0006789](#))
    - A category is now mandatory for every KB, goal is to have and KB articles in a tree structure (see [KB0007165](#))
  - 67 new Knowledge Base articles [[Link](#)]
- Upcoming 'CERN Service Management' training sessions are available in the CERN Learning Hub, details in the last news [[Link](#)]

# Service Now (2/2)

- **Service Portal: reminder to update old links**

- Thank you for all your efforts to update links
- We have done our best to track down old links (those that contain 'service-portal' and '.do?') and inform services
- **Old links now give 'Page not found' message**, see: [KB0006992](#)





# Thanks for your attention!

Stay tuned, visit:

<https://computing-blog.web.cern.ch/>