

# **Change of the recommended Linux distribution at CERN and Fermilab**

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**WLCG MB - 20 December 2022**

# Quick Context Recap

## → In late 2020 Red Hat announced ...

- A focus shift from CentOS Linux to CentOS Stream (as the RHEL upstream), and
- The discontinuation of CentOS Linux by the end of 2021

## → Given the state of the EL rebuilds at the time ...

- ... and the costs of RHEL licenses ...
- CERN & FNAL recommended CentOS Stream as the production platform

## → WLCG MB: RHEL, EL rebuilds & Stream are equivalent

- ... in response to worries about upstream nature of Stream

# Re-evaluation in 2022

- “... should issues arise with the adoption of CentOS Stream 8, it would be straightforward to reevaluate ...”
  
- **CentOS 7 EOL in 2024**
  - Many services still on 7, will need to take a decision!
  
- **Additional information at hand**
  - Increased experience with CentOS Stream
  - Change of the license situation for RHEL at CERN
  - Maturity of EL rebuilds, such as AlmaLinux or Rocky

# Additional Info & Deciding Factors



## → Bugs and CVE handling

- Despite upstream and downstream pipelines, bugs made it into production\*
- Lack of formal notification and ambiguity of resolution status

## → RHEL licenses

- Academic site license which lasts until 2029
- “Extended Research Network”

## → Status of Enterprise Linux rebuilds

- Rebuilds have gained maturity and traction
- Various (WLCG) sites and some experiments rely on them

\*we have a list



# Options



## → Recommend RHEL

- Leverage the negotiated site license

## → Recommend an EL rebuild

- Reduced license risk
- CERN academic license not used

## → Recommend RHEL and an EL rebuild

- Leverage site license plus EL as exit strategy
- Provide help and support the WLCG community



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# Selecting an EL Rebuild

## → Two valid contenders

- AlmaLinux
- Rocky Linux

## → Both are “1:1 bug-for-bug compatible” with RHEL

- CMS compatibility matrix



# Criteria we looked at ...

- Ownership/Governance
- Package version policy
- Architecture support
- Community involvement
- Community contribution
- Traction in HEP
- CentOS SIG compatibility
- CVE update delay
- Major/minor release delay
- ...  **AlmaLinux**



# Decision making process / communication



- Review starting ~ August/September 2022
- **Input gathering: Linux Future Committee #6 on Oct 28, 2022**
- **Input gathering: HEPiX Autumn 2022 on Oct 30, 2022**
- **Input gathering: Fermilab, stakeholders, community members**
- **Joint Fermilab/CERN statement on Dec 7, 2022**
- **Linux Future Committee #7 on Jan 16, 2023**



# What about CentOS Stream users?

- **Recommended to move to AlmaLinux or RHEL**
  - Few services affected
- Q1 2023: Decommission support for CentOS Stream 9
- Q3 2023: Decommission support for CentOS Stream 8

# What about CentOS 7 users?

- EOL is June 30, 2024 (ELS is June 30, 2026)
- **Recommended to move to 9 family (AlmaLinux or RHEL)**

# AlmaLinux “or” RHEL ...?



- Risk of user confusion?
- **CERN IT supports both**
- **AlmaLinux is freely distributable**
  - Helpful for containers and external collaborations
  - No license risk
- **RHEL may be required by specific software solutions**
  - Enterprise solution, licensed until 2029



