

Change of the recommended Linux distribution at CERN and Fermilab

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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



