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## **XRootD 5.0.0: encryption and beyond**

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For almost 10 years now XRootD has been very successful at facilitating data management of LHC experiments. Being the foundation and main component of numerous solutions employed within the WLCG collaboration (like EOS and DPM), XRootD grew into one of the most important storage technologies in the High Energy Physics (HEP) community. With the latest major release (5.0.0) XRootD framework brought not only architectural improvements and functional enhancements, but also introduced a TLS based, secure version of the xroot/root data access protocol (a prerequisite for supporting access tokens).

In this contribution we explain the xroots/roots protocol mechanics and focus on the implementation of the encryption component engineered to ensure low latencies and high throughput. We also give an overview of other developments finalized in release 5.0.0 (extended attributes support, verified close, etc.), and finally, we discuss what else is on the horizon.

### **Consider for promotion**

Yes

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