

Optimising NGAS for the MWA Archive

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Abstract The Murchison Widefield Array (MWA) is a next-generation radio telescope, generating visibility data products continuously at about 400 MB/s. Efficiently managing and archiving this data is a challenge. The MWA Archive consists of dataflows and storage sub-systems distributed across three tiers. At its core is the open source software—the Next-Generation Archive System (NGAS)—that was initially developed in ESO. However, to meet the MWA data challenge, we have tailored and optimised NGAS to achieve high-throughput data ingestion, efficient data flow management, multi-tiered data storage and processing-aware data staging.

Keywords Murchison Widefield Array · MWA Archive · Data-intensive computing · In-storage processing

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