

Cloud Services Manual

As we transition into the era of "big data" in astronomy, cloud-hosted observations are becoming an essential tool for research. This manual documents the cloud technologies that MAST has adopted and how you might put them to use.

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Manual Contents

Why Switch to the Cloud?

In short, because astronomical data is growing more quickly than our capacity to store and transmit it. Over its lifetime, the Hubble Space Telescope has downlinked an average of 2.7 GB of data daily. The [Roman Space Telescope](#) will downlink around 1375 GB per day, with 20 PB of data archived after its five-year primary mission. Other missions like TESS and the Rubin Observatory will build up similarly enormous treasure troves of observations. It is impractical and cost-prohibitive to build a data center capable of serving this vast quantity of data to our users around the globe.

We understand that this is a substantial paradigm shift and sympathize with those who feel uneasy about remotely accessing data; however, this change is essential if we are to continue to serve the astronomical community effectively. We welcome your feedback as we transition to this new system.

Contact Us

For issues with cloud services, requests for new features, or general comments, contact the [MAST HelpDesk](#).

Citations and Acknowledgements

Please [acknowledge the use of data](#) obtained from MAST in publications.

For Further Reading...

- [News Release for Roman](#), comparing its data downlinked to that of Hubble