

RESEARCH DATA STORAGE OPTIONS AT MONASH

DECISION POINTS							STORAGE OPTION(S)					
Working with datasets over 500GB?	Working with active ¹ data?	Using the Monash SOE ² ?	Working with critical ³ data?	Are you sharing your data?	Are your research partners external to Monash?	Do you require remote access?	Desktop, My Documents, My Pictures	Google Team Drive	Google Drive	Monash Figshare ⁴	MeRC storage ⁵	CloudStor and File Sender ⁶
Yes	⚠ Seek advice from the MeRC →										✓	
No	No	⚠ Seek advice from the MeRC →								✓	✓	
No	Yes	No	⚠ Seek advice from the MeRC →				✓	✓ Multiple owners recommended	✓		✓	✓
No	Yes	Yes	Yes	Yes	Yes	Yes					✓	
No	Yes	Yes	Yes	Yes	No	Yes					✓	
No	Yes	Yes	Yes	Yes	No	No					✓	
No	Yes	Yes	Yes	No	No	No					✓	
No	Yes	Yes	No	Yes	Answer can be Yes or No	Answer can be Yes or No	✓	✓ Multiple owners recommended	✓	✓		✓
No	Yes	Yes	No	No	No	Yes	✓	✓ Multiple owners recommended	✓	✓		✓
No	Yes	Yes	No	No	No	No	✓	Multiple owners recommended	✓	✓		✓

¹ For the purposes of this document “active data” are defined as research data that require ongoing access for modification, analysis, compilation, etc.

² Monash-provided computers running the Monash Standard Operating Environment (SOE).

³ Critical data: Research data classified by Human and Animal Ethics Committees, research data with any personal identifiable information combined with health or sensitive information and research data with information subject to regulatory compliance.

⁴ For individuals or teams, user-controlled sharing. Data published with DOI. Critical data records (metadata only) published with DOI. <https://www.monash.edu/library/researchdata/figshare/how-to-start>

⁵ The Monash eResearch Center (MeRC) <https://www.monash.edu/researchinfrastructure/eresearch/work-with-us>

⁶ CloudStor (a cloud-based storage service) and File Sender (a file transfer service) are provided by AARNet. <https://www.aarnet.edu.au/network-and-services/cloud-services-applications/cloudstor>

Research Data Storage Options	BENEFITS	LIMITATIONS
<p>Desktop, My Documents, My Pictures</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login For Monash-provided computers running the Monash Standard Operating Environment (SOE) 	<ul style="list-style-type: none"> SOE: security is centrally managed – data can be erased if computer is lost or stolen Backups: all files saved to the Desktop, My Documents and My Pictures folders are synchronised with the network server in real time when connected to the Monash network 	<ul style="list-style-type: none"> Not recommended for critical data Short-term storage for working data; not a permanent storage solution Local hard drives can fail Data stored in other location on computer are not backed up
<p>Google Team Drives</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login External collaborators can create free account via Google.com 	<ul style="list-style-type: none"> Cloud-based: provides access to files locally and remotely for sharing and collaboration Backups: three copies of virtual files are kept on the GFS (Google File System) across multiple Google data centres Google Docs, Sheets and Slides are kept forever (all older versions are self-recoverable) Versions can be managed automatically No cap on the number of versions kept (limited only by storage quota) 	<ul style="list-style-type: none"> Not recommended for critical data Data requiring long-term retention should be stored on other University storage services, contact the MeRC Backups: process is proprietary, therefore undisclosed Once a file is deleted and removed from the recycle/trash bin, it is gone forever Make sure your Team Drive has multiple owners, files will be automatically deleted by Google soon after your Monash account is no longer valid
<p>Google Drive</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login External collaborators can create free account via Google.com 	<ul style="list-style-type: none"> Cloud-based: provides access to files locally and remotely for sharing and collaboration Backups: three copies of virtual files are kept on the GFS (Google File System) across multiple Google data centres Google Docs, Sheets and Slides are kept until user leaves Monash (all older versions are self-recoverable) Versions can be managed automatically No cap on the number of versions kept (limited only by storage quota) 	<ul style="list-style-type: none"> Not recommended for critical data Google Team Drive is more suitable for research teams or group work Data requiring long-term retention should be stored on other University storage services, contact the MeRC Backups: process is proprietary, therefore undisclosed Once a file is deleted and removed from the recycle/trash bin, it is gone forever Files get deleted soon after your Monash account is no longer valid
<p>Monash Figshare</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login External collaborators can create free account via figshare.com 	<ul style="list-style-type: none"> Files stored securely on Monash University storage Cloud-based: provides access to files locally and remotely for sharing and collaboration Upload any file format Unlimited number of user-published files Digital Object Identifiers (DOI) for user published files Open data compliant for journal publication 	<ul style="list-style-type: none"> Not recommended for critical data <ul style="list-style-type: none"> These can still be published with a DOI using Monash Figshare Large datasets and files should be stored on MeRC storage. These can still be published with a DOI using Monash Figshare Access is closed if your Monash account is no longer valid – email research.repository@monash.edu to arrange for data to be moved
<p>MeRC storage</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login <ul style="list-style-type: none"> High Performance Computing (HPC) services (MASSIVE, MonARCH) and Visualisation (CAVE2) NeCTAR Research Cloud MyTardis – store.monash Critical data storage and services 	<ul style="list-style-type: none"> Files stored securely on Monash University storage Backups: 2 – 4 copies are kept across two data centres; 30-day history For archiving modest to very large research datasets For supporting research data applications, instrumentation backup and visualisation For the generation and analysis of research data 	<ul style="list-style-type: none"> Backup timing varies according to storage service Daily backups are mainly for archival data – users may experience restoration delays
<p>CloudStor and File Sender</p> <ul style="list-style-type: none"> For Monash staff and researchers with a current Monash Login Can be used by anyone in the AAF with a current login provided by their institution 	<ul style="list-style-type: none"> Maximum storage is 100GB per user Users can negotiate group storage quotas for research projects direct with AARnet Up to 100 email recipients 	<ul style="list-style-type: none"> CloudStor should never be used for storing critical data Not suitable for storing master copies of research data Maximum 1 file per upload Subject to AARnet terms and conditions of service and availability Research data not stored on Monash storage File Sender is not suitable for file transfer of critical data as encryption only occurs during transmission