Retrieval efficiency

What is the objective of these pages?

- To help users to improve their **MARS** requests **performance** via the **Web API**.
- A good understanding of the **MARS efficiency** issues is **essential** especially for users interested in downloading **large amounts** of data.
- Users may also visit the MARS Retrieval efficiency page for more information

What would be the natural way to group requests?

💡 The idea is to request **as much data** as possible from the **same tape file** or to **reduce the number of tapes** involved.

- The **number of tapes** a MARS request is going to access will have an **impact** on its **scheduling** on the server.
- A **large number of tapes** implies **more waiting time**.
- As a **rule of thumb**, two or more separate requests accessing files on different tapes are scheduled more efficiently than a single request accessing two or more tapes.

⚠️ Additionally users should be aware of the following:

- **The data volume** to be retrieved should be **sensible**, up to **20GB** per request.
  🦷 Check that your computer **resources** and limits are **adequate** for the amount of data to retrieve.
- **The number of fields** to be retrieved should be also a **sensible** number, up to **600.000 fields** per request.

More details and examples:

- Operational Data (authorised users)

- ERA5 retrieval efficiency
- ERA-Interim retrieval efficiency
- ERA-20C retrieval efficiency
- CERA-20C retrieval efficiency
- S2S reforecasts retrieval efficiency
- TIGGE retrieval efficiency
- UERRA retrieval efficiency
- YOPP retrieval efficiency
- CAMS Reanalysis retrieval efficiency