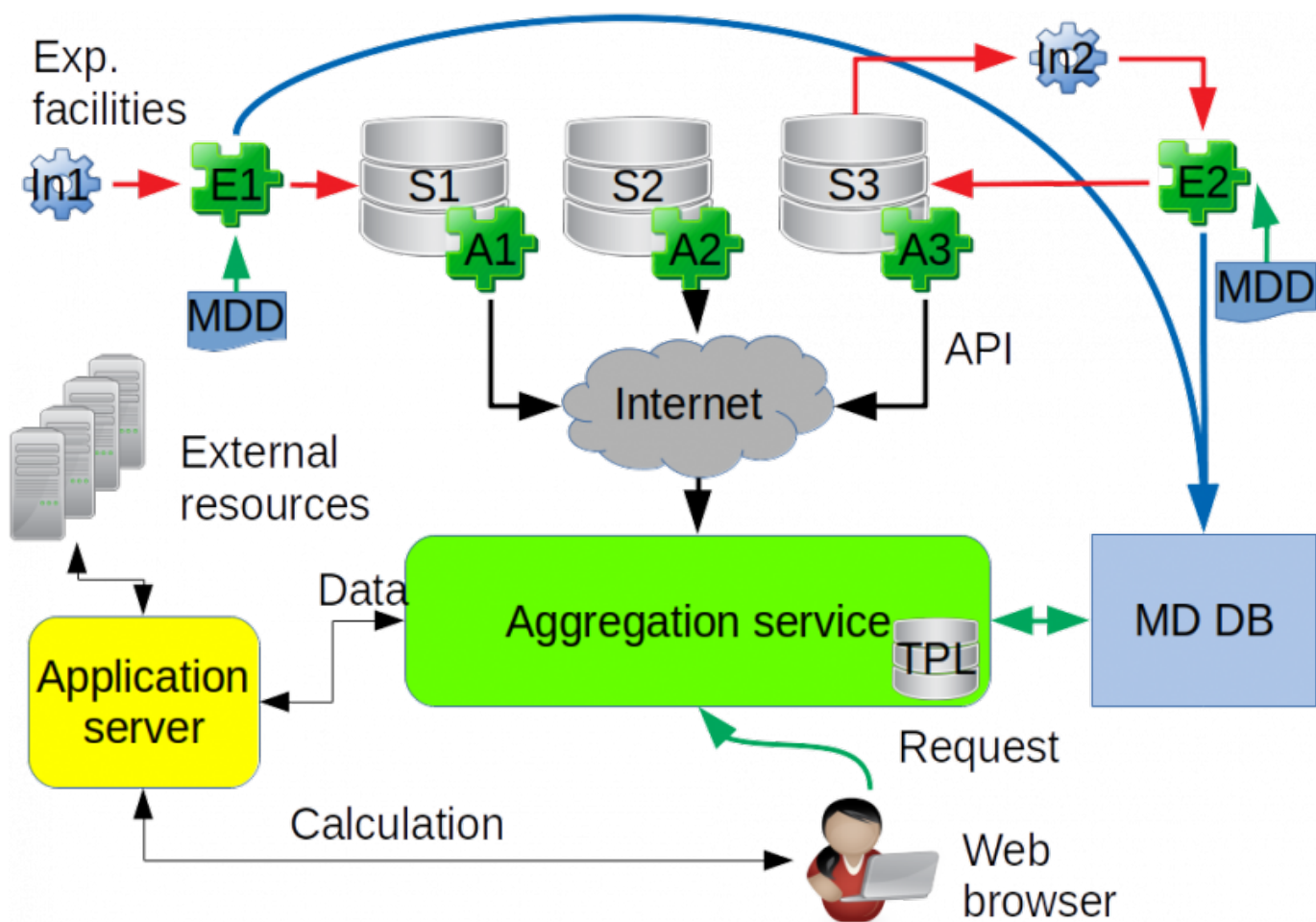


# APPDS Architecture



Main ideas that are embedded in the architecture:

- 1) lack of intervention in local storage, adapters are used for data access;
- 2) user requests are processed on a dedicated server based on metadata only.

- S1, S2, ... - Local data storage. We consider the local storage as a file storage.
- In1, In2 - Data sources. There are two types of sources: primary data sources like experimental setups (In1) and secondary data sources (In2). An example of secondary data source may be program which calibrate the primary data.
- MDD - Metadata description. It is assumed that this is a description of the structure of binary files (Kaitai) with an indication of what is metadata.
- E1, E2, ... - Metadata extractors. These are services that ensure the retrieval of meta-information and the registration of incoming data in the metadata database.
- A1, A2, ... - Adapters. Adapters provide unified API to access to the data on local storage. We propose to use CERNVM-FS as a standard adapter.
- MD DB - Metadata database. This is a service which support two main function. First - register collected metadata, and second - process the user requests for data. This is the single place where location of necessary data define taking into account user request.
- AS - Aggregation service. This service accept user requests and aggregate corresponding data into new collection taking into account the request. The request may contain either file-level criteria (for example session date) or event-level criteria (for example event energy).
- TPL - Template library. The collection of the programs is used for aggregating data.

- UI - User interface - the Web interface for user access.
- Application service - the external service which provide the access to external (computing) resources.

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