**Use Case: Modifying data**

**Goal:**
Permit or deny modification or replacement of data.

**Actors:**
Data provider (human or system), infrastructure (system), data consumer (human)

**Summary:**
In scientific data infrastructures, individual objects are frequently modified and re-distributed for reasons such as error correction or regular recomputation. Such situations should however be accountable to meet user expectations, ease maintenance and ensure a fundamental level of service quality. Replacing or modifying objects should be properly managed.

This use case is strongly related to the versioning case, where references to old data are kept while new data always receives an individual new PID: If data is allowed to be replaced as part of this use case's main flow, the versioning flow may be kicked off.

**Pre Conditions:**
The data object is available in the infrastructure and bears a PID

**Main Flow (submit):**
1. The data provider submits a modified data object to the infrastructure with the specific request that this object should replace the existing object
2. The infrastructure verifies that the object can be replaced or modified
3. If the object is flagged as static, the infrastructure responds to the data provider with an error
4. If the object is not flagged as static, the infrastructure replaces the object with the modified object
5. The infrastructure responds to the user with a success message and the object's PID

**Main Flow (lookup):**
1. The data consumer requests the data object from the infrastructure using its PID
2. The infrastructure provides information about the object including a statement when it was last modified and whether future changes are possible

**Special cases:**
One special case might be that the modified object is an extension of the existing object (additional items for a collection, new data in a continuous time series). The infrastructure should treat such cases differently to prevent overwrites of existing data and to be able to tell the data consumer that the object is dynamic.