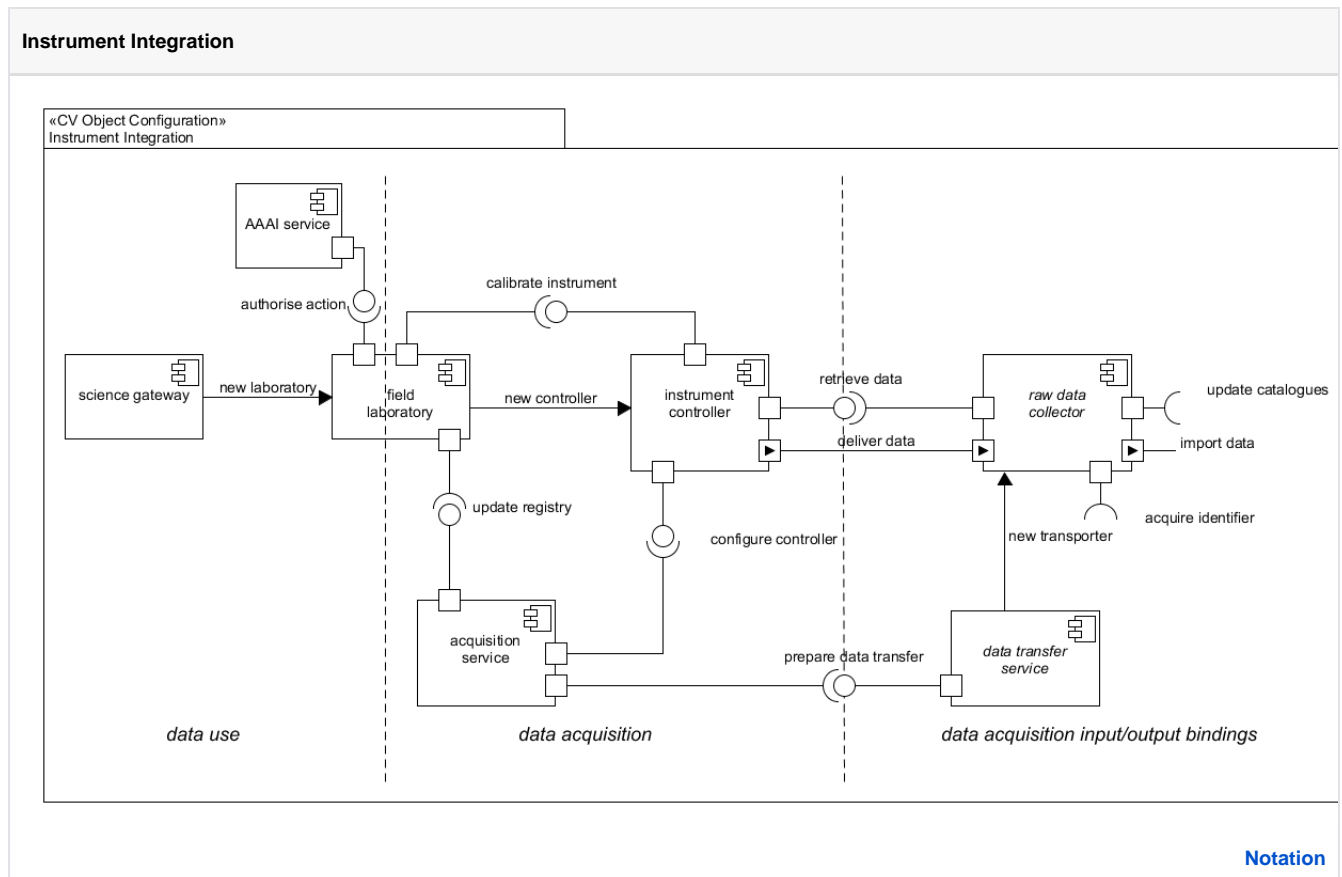


# CV Instrument Integration

**CV Data Acquisition** relies on an integrated network of data sources (referred to generically as 'instruments') that provide raw measurements and observations continuously or on demand. This network is not necessarily static; new instruments can be deployed and existing instruments can be taken off-line or re-calibrated throughout the lifespan of a research infrastructure. In the Reference Model, modifications to the acquisition network should be performed via a 'virtual laboratory' that permits authorised agents to oversee acquisition and calibrate instruments based on current community practice or environmental conditions.



Instruments can be added to and removed from a data acquisition network by a **field laboratory** accessed via a **science gateway**. The field laboratory must be able to provide an **instrument controller** for any new instrument added in order to allow the data acquisition subsystem to interact with the instrument. Deployment, un-deployment or re-calibration of instruments requires authorisation - this can only be provided a valid **AAA service** (via its *authorise action* interface). Any changes to the data acquisition network must be registered with an **acquisition service** (via its *update registry* interface).

The behaviour of an instrument controller can be configured by the acquisition service by invoking functions on the controller via its *configure controller* interface.

A field laboratory also provides the means to calibrate instruments based on scientific best practice where applicable - this is done via the instrument controller's *calibrate instrument* interface.