



Service template for livestock monitoring

TEMPLATE ID: livestock_monitoring

VERSION: 0.1

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Approval Date	TBD

Purpose of the document

The purpose of this service template specifications document is to provide a technology-agnostic overview of the *livestock monitoring* template. It describes a well-defined baseline of the service by clearly identifying the service version.

The document describes the shared functional aspects of any service instance implementing the *livestock monitoring* template, the operational and business context of such services, possible requirements, relations to other services and validation aspects.

Intended audience

ATLAS software vendors, participants, who want to provide an ATLAS *livestock monitoring* service instance, or who wish to consume ATLAS *livestock monitoring* service instances.

Functional overview

Services implementing the *livestock monitoring* template will monitor the behavior of the livestock based on sensor data and the template is species agnostic. Examples of sensor data would be:

- Video
- Noise
- Accelerometers
- etc.

Service MAY calculate time series data for the following:

- Activity Level
- Eating Activity
- Aggression Level
- Temperature
- Weight
- Noise Level
- Animal Size

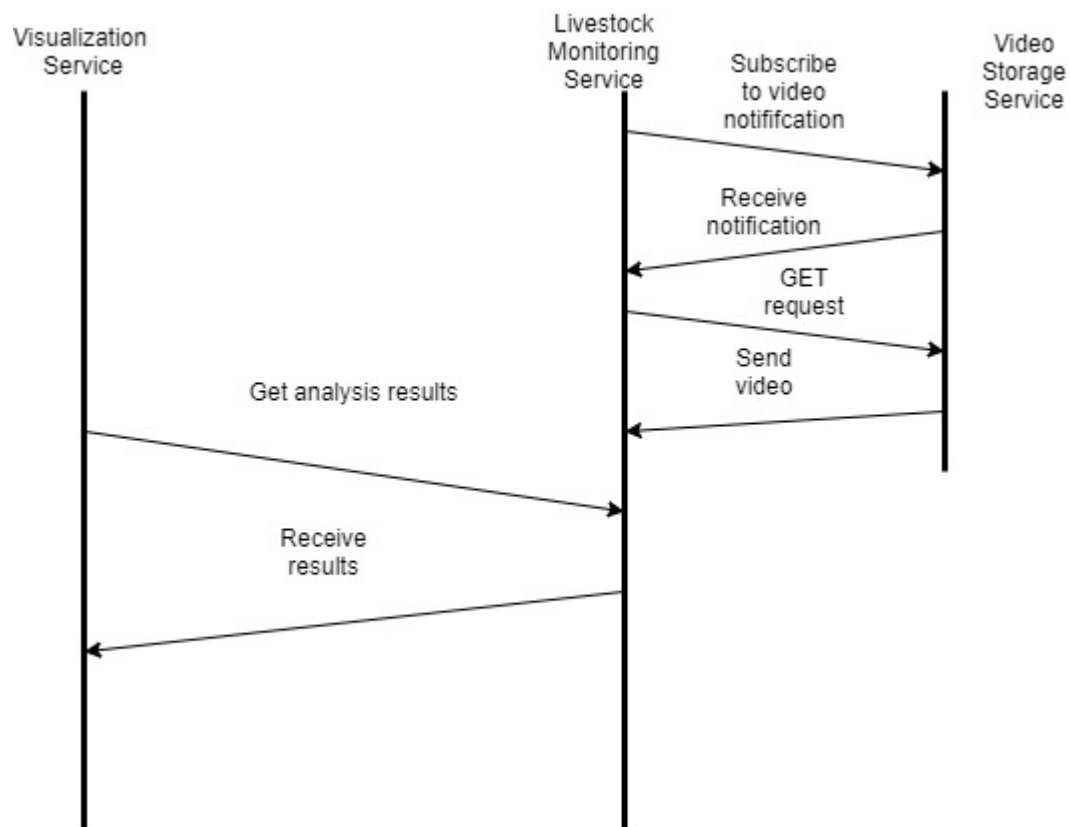
The time series data would be provided for either a group of animals or individual animals.

Service MAY capture discrete event data out of the following events:

- Animal Death
- Aggression Events

Operational context

Livestock monitoring service communicates with the video storage service and the visualization service in order to deliver the analysis services to the end consumer. The Livestock monitoring services subscribes to be notified whenever a new video arrives in the video storage service. Once the new video arrives, the livestock monitoring service receives a notification and downloads the video and starts generating the analysis results. Once the analysis results are generated these are available to the visualization service to be queried.



Service template API

This section provides an abstract overview of the service template API. The detailed OpenAPI specifications can be found in the service registry.

Endpoints

[get_timeseries_activity](#)

Inputs:

- Start time
- End time
- resolution

Outputs:

- start time

- end time
- confidence
- activity
- eating activity
- biometric params

get_discrete_events

Inputs:

- start time
- end time

Outputs:

- start time
- end time
- confidence
- eventType
- timestamp
- subparameter
- animal ID
- group ID

Data model

The detailed data models, with examples can be found in the adjoining OpenAPI specifications.

Dynamic behavior

<TobeAdded>

Validation

<Describe what is required from livestock monitoring service instances in order to automate service validation>

References

<TobeAdded>