

TECHNICAL DOCUMENT

# Transport Protocol Specification CSV — Comma Separated Value TESSy

Version 2.7

www.ecdc.europa.eu

**ECDC** TECHNICAL DOCUMENT

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Version 2.7

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# Version history

| Version: | Change: |
|---|---|
| 2.2 | Format YYYY-Qq added to incomplete date. |
| 2.3 | Definition of batchId changed. |
| | Reference added to the 'Web Service Technical Documentation'. |
| 2.4 | The requirement for field NumberOfCases has been re-phrased for aggregate record types. |
| 2.5 | Added a more exact definition of week. |
| | Updated FAQ with description on how to report zero cases. |
| 2.6 | Added description of the complex data type in chapters 3 and 4. |
| | Added description for compressing / bundling together files with ZIP compression. |
| 2.7 | Language revised. |
| | Suggested file naming convention for complex record types revised in chapter 4. |

# Purpose

The purpose of this document is to describe the data transport format and the procedure for reporting infectious disease surveillance data to ECDC using TESSy.

# Audience

This document is targeted to data providers of TESSy that are responsible for data upload, that is, mainly data managers in the national surveillance institutes of the EU Member States and the EEA countries.

Another target audience is stakeholders that wish to start using machine-to-machine communication with TESSy by using the TESSy web service interface.

# 1 Introduction

This document describes the format of the transport protocol for data submission to the TESSy system.

The document is divided into three sections:

an introductory section giving an overview of the system,

a technical section specifying the format, and

a section describing information flow.

For more information, see the *Documentation Structure* section at the end of this chapter..

## 1.1 Background

The European Centre for Disease Prevention and Control (ECDC) was established in May 2005. The founding document establishes that ECDC shall provide a technical platform for data collection in Europe.

Prior to the establishment of ECDC, there were 17 Dedicated Surveillance Networks (DSNs) that collected data on a variety of diseases. All Member States submitted data individually to every DSN, using different file specifications, requiring a huge effort from the Member States. On the other hand, all DSNs had to provide a system for data collection, validation and analysis.

The European Surveillance System (TESSy) is a highly flexible metadata-driven system for collection, validation, cleaning, analysis and dissemination of data. The key aims are data analysis and outputs for public health action. All EU member states (27) and EEA countries (3) will report available data on infectious diseases (49), as described in decision No 2119/98/EC, to the system. Apart from routine surveillance, TESSy will also replace the data collection for the present DSNs to provide European experts with a one-stop shop for European surveillance data.



## 1.2 Glossary / Definitions

| | |
|---|---|
| Batch | Contains a file with the information to report (*Reporting Periods* and *Records*) to the system. A batch is first uploaded by a user, who can later choose to approve or reject the batch.<br>A batch in *TESSy CSV* consists of one file that contains the *Records*, while a batch in *TESSy XML* consists of one file containing both *Records* and *Reporting periods*.<br>Synonyms: Report, batch, Data file. |
| Batch identifier | Only needed when using the TESSy web service. It is an internal reference for each organisation to use in order to identify uploaded batches. |
| Coded Value List | Describes name and purpose of a list of Coded Values. The values of a field in a Record Type can be restricted to the entries in a Coded Value List. Example: The Coded Value List *Sex* has the entries *male, female, unknown*; the field *Administrative Gender* is restricted to values in the list *Sex*.<br>Synonyms: Value Set, Lookup List |
| Coded Value | An entry in a coded value list. Each coded value has a code (usually a mnemonic) and descriptions. Examples: *('M', 'male'), ('NL', 'The Netherlands')*.<br>Synonyms: Lookup, Code |
| CSV | Comma-separated values — A file format where the data are transmitted in plain text (one line per *Record*) and the values are separated by ',' as a separation character. |
| Data source | The origin data source, usually the national surveillance system, that the provider queries to extract data to report to TESSy.<br>Synonyms: Surveillance System |
| Data warehouse | A separate database, on which all reports and queries are based. |
| Error | A severe validation failure, which causes the batch to be automatically rejected.<br>Synonyms: Validation failure, Validation result. |
| Field | A *Record* is composed of fields. Each field has a name, a type and a description. Currently supported types are Numeric, Text, Date, IncompleteDate, CodedValue and Complex (field containing fields in a tree structure). A field in a *Record* contains information passed to TESSy. |

| | |
|---|---|
| | A field can be required (must be supplied) and/or repeatable (can list more than one value).<br>Synonym: Variable |
| Metadata | Defines TESSy data structures and contains: *RecordTypes, Fields, Coded Value Lists* and *Coded Values* etc. The metadata also contains all validation rules.<br>To achieve maximum flexibility TESSy is very much metadata-driven, that is, new Record Types can be added, Fields can be added, changed or removed without programming effort. |
| Metadata set | A snapshot of the *Metadata* at a specific moment in time. The metadata set is named with a positive integer.<br>When reporting to the system, the provider can use a metadata set number to identify which *RecordTypeVersions* are used as default (the latest record type version at the time of the snapshot). |
| Mnemonic | A short but meaningful alphanumeric code representing a *Coded Value*, given in the data file for a *Field*.<br>Synonyms: Code. |
| Record Type | Describes the structure of the data to be transmitted, usually a case report for a specific disease. It has a name, a list of Fields and a set of constraints (for example, *DateOfBirth < DateOfOnsetOfDisease*). Example: *SalmonellosisCase*.<br>Synonym: Questionnaire, Form |
| Record Type Version | A positive integer representing the version of the *RecordType*. Different versions may contain different fields, validation rules, required fields etc.<br>When submitting data, it is very important to indicate which record type version the provider intends to use. This can be indicated in two ways: either using a *Metadata Set* (for the whole batch) or specifying the record type version field (individual *Record Type*). If record type version is specified, it overrides the *Metadata Set*. |
| Record | An information item with a specified *Record Type* entered to TESSy, usually a case report or an aggregate entry. |
| Remark | A remark is used in the validation process to indicate an unlikely value or an unlikely combination of values. Example: A five year old boy notified as homosexual.<br>Synonyms: Improbable data, Advice to change. |
| Reporting Period | Describes the intended availability of data on a *Subject* in a specified time frame for a *Data Source*. This information is important to distinguish reporting of zero cases of a disease from not reporting this disease at all during the specified time. |
| Role | All users in TESSy are associated with one or more roles, which define what the user is authorised to do and which data the user is allowed to see. There are many roles defined, divided into three main categories: Provider (user is allowed to upload data), Approver (user is allowed to approve an uploaded batch) and Reader (user is allowed to download data and view data in reports). |
| Subject | Abstract term to specify what kind of information is stored in a *Record Type*, usually a disease. For example, when sending data on Salmonellosis cases, the subject is Salmonellosis.<br>Synonyms: Disease. |
| TESSy CSV | A short term for the format specified in the document *Transport Protocol Specification, CSV – Comma Separated Value, TESSy.* |
| TESSy Storage | The set of databases where surveillance data are stored at ECDC. |
| TESSy XML | A short term for the format specified in the document *Transport Protocol Specification, XML – Extensible Markup Language, TESSy*. |
| User | A user of TESSy (external or ECDC internal). Can be a data provider and/or a data consumer. Each user in TESSy is associated with one or more *Roles*, specifying what the user is allowed to do or see.<br>Synonyms: Login |
| Warning | A minor validation issue. The user who approves the batch decides whether to keep or change the issue. A warning can often set one or more *Fields* to unknown as data cleaning.<br>Synonyms: Validation warning, Validation result. |
| Web Service | A standard protocol for machine-to-machine communication. TESSy provides a Web Service-based interface to upload data. For more information, see the document *Web Service Technical Documentation*.<br>Synonyms: Machine-to-machine connection. |

| | |
|---|---|
| Wrapper | A small piece of software responsible for the communication between the national surveillance system database and TESSy. The national system relies on the wrapper for upload, fetching validation results and approval.<br>The wrapper does not have to be external software, but can be included within the national surveillance system depending on the national setup. |
| XML | EXtensible Markup Language — A data transport format in which the data are structured hierarchically. |

## 1.3 Operation principles

The current version of TESSy supports upload of batches containing surveillance data. This upload can be done either manually, by using a secure web-based user interface, or automatically, by using an encrypted Web Service (machine-to-machine communication).

Data submission to TESSy is done according to the following steps:

1. The batch (one or more data files, depending on the format) is uploaded to the server.
2. The data is validated in the background. If the data contains severe errors, the batch is automatically rejected.
3. The validation result can be checked by the provider, who can choose to approve (confirm) or reject the batch.
4. After approval, the data are made available for analysis, reports etc.

## 1.4 Data validation

All data uploaded to TESSy is automatically validated to ensure quality. TESSy provides three levels of validation in order to ensure the data quality for European surveillance data: Errors, Warnings and Remarks (see the glossary above for details). An error automatically rejects the batch, while a warning or a remark can be approved or rejected by the user. Before approval, the system lists all errors, warnings and remarks to the user.

1. **Validation of the readability of the batch.** Does the file comply with the specified format? Can the information be parsed?
   - Error: Any invalidation generates an error, for example, if the file is binary, if a CSV file has the wrong delimiter or if a XML file does not comply with the XML Schema.
2. **Validation of the data contents of the batch.** Are all fields supplied valid? Are any required fields missing? Are all repeatable fields valid?
   - Error: Some fields must be supplied by default, for example, record id, record type and data source. The severity for the rest of the fields is set in the metadata. If a field has the highest severity (error) and the field is required or not repeatable, an error is raised if the field does not validate.
   - Warning: Any validation failure with the medium severity (warning) for a field or combination of fields, for example, a required field is missing or an unrecognised coded value, an invalid date, an integer out of range etc.
   - Remark: An unlikely combination of fields, for example, a 4-year-old boy homosexually infected with HIV.

There are several types of validations:

| | |
|---|---|
| Data Type: | TESSy checks the contents of each field whether it has the expected data type. A numeric field, for instance, must only contain a number; a date field must be formatted according to the ISO standard etc. |
| Required field: | A record is checked if all required fields are provided. |
| Repeating: | If a field that is not allowed to be repeated occurs more than once, this generates a validation failure. |
| Range: | Numeric fields and dates can be checked against a given range, for example, the age must be less or equal to 120. A range violation usually results in setting the field to 'unknown' and the marking of this record with an error message during validation. |
| Coded Value: | If a field of type Coded Value contains a value that is not in the respective Coded Value List, this usually results in the setting of the field to 'unknown' and the tagging of the record. |
| Cross-field: | Some fields depend on each other, that is, the date of onset of disease must be previous to the date of death, a Salmonella phage type is only valid for certain serovars etc. This usually results in setting the less stable date to 'unknown' and tagging of the record. |

## 1.5 Case-based and aggregated data reporting

Since not all countries are able to provide case-based surveillance data, both case-based and aggregated-based data is supported by TESSy. We therefore avoid referring to ‘cases’ and instead used the more abstract term ‘record’. As currently the main focus of TESSy is the collection of case reports, the term will frequently been read as ‘case report’.

## 1.6 Support

ECDC offers support to Member States and TESSy users in several ways:

- Support — Support for TESSy data preparation, upload and viewing is available via the ECDC helpdesk. The helpdesk helps the users regarding access and errors in the system, and with any data-specific answers. The helpdesk is available from 9am to 4.30pm CET (Stockholm time).
- Contact: **TESSy helpdesk:** tessy@ecdc.europa.eu**; +46 (0)8 5860 1601**
- mailto:User trainings — To help users adjust to reporting data to TESSy, certain assistance and training is available. Contact tessy@ecdc.europa.eu for details.

## 1.7 Document structure

This document is divided into three sections:

- Introduction with an overview and a glossary, followed by some TESSy concepts
- Technical , beginning with the variable definitions and the CSV format specification
- Frequently asked questions and troubleshooter.

The Appendix contains some example files.

# 2 Concepts

This section explains some of the base concepts used by TESSy. Understanding these concepts is vital for successful submission of data.

## 2.1 Batch identification

When using the TESSy web service each batch must have an identifier that is unique for the sending organisation. The batch identifier is an incremental positive integer (starting at 1) that is given by the web service client. TESSy enforces that each batch identifier given by the web service client is unique and greater than all previously used batch identifiers (see below), otherwise the batch is automatically rejected.

batchId > max(previously used batchId:s)

## 2.2 Reporting periods

The Reporting Period specifies the period of time which a certain subject has been under surveillance and reported to the system. The dates in the Reporting Period refer to the *Date used for statistics* in the records.

Reporting period information is important in order to distinguish the reporting of zero cases of a disease from that of no reporting at all during the specified period. If applicable, a reporting period should be specified for each combination of subject and data source in a batch upload.

The reporting period must be present for each respective disease (subject) and surveillance system (data source). The end of the reporting period is usually the previous month. There is a possibility to also specify a start date, which is used, for example, when replacing data.

During data upload, the provider must supply any update in reporting periods compared to the last submission. When using the XML format, the Reporting Period information should be provided in the file, while when using the CSV format the Reporting Period should be edited in the user interface.

For example: The batch to be sent contains Salmonellosis cases for June 2007. The data from January 2006 until May 2007 has been sent to the system previously. Then the Reporting Period has to be updated from '2006-01-01 until 2007-05-31' to '2006-01-01 until 2007-06-30'.



## 2.3 Metadata versioning

As new pathogens emerge frequently, laboratory testing has evolved and interventions have adapted, all of which require new and specific information. This emphasises a need for system functionality in order to add or remove variables to report, to classify them as more or less important, to allow some parties to report more specialised information and to maintain backward compatibility. These requirements are covered by a non-static metadata. The metadata defines TESSy data structures and contains: RecordTypes, Fields, Coded Value Lists and Coded Values etc. The metadata also contains all validation rules.

Metadata versioning is used to take snapshots of the metadata and label them for usage. ECDC frequently publishes any changes of the metadata by taking snapshots and labelling them with a metadata set. When supplying data to TESSy, the provider needs to indicate which snapshot of the metadata they intend to use. This is usually done in the following way:

1. The provider gives the metadata set (version of the snapshot) for the whole batch. During validation, TESSy uses this to look up which record type versions are intended as default. For CSV, the metadata set is specified in the user interface. For XML, the metadata set is specified in the file.
2. For each record type, the provider can choose to override the default record type version (given by the metadata set). They do this by giving a record type version – during web upload of a CSV file and in the XML file itself, if using the XML transport protocol.

## 2.4 Data source

Every piece of data that is inputted into TESSy must be labelled with the originating data source. By the data source, we usually mean the surveillance system from which the data originates. Each organisation has a list of surveillance systems

to choose from and users from that organisation can use a web interface to add/remove data sources or update existing ones.

This labelling is very important for data comparability. Each surveillance system has different features, which clearly identify what issues to take into account when comparing data at EU level.

## 2.5 Date used for statistics

A key aim of TESSy is that the numbers in the output match the official numbers of all Member States that provide data to the system. Each Member State has its own definition of which date (date of onset, date of diagnosis, date of report etc.) to use as reference for when a case should be counted. This is why TESSy introduces a generic date, date used for statistics, that must be used by each Member State individually to indicate which date is used.

The date used for statistics is a required field that generates an error if missing, which implies that the batch is automatically rejected. The date defines to which year, month and day a case is counted in standard reports. Furthermore, this date has to be within the date range indicated in the reporting period.

## 2.6 Updating and deleting records

When updating or deleting records in TESSy, the previous state of the record will still be available. All changes to the data are marked with a timestamp. Using this technique ensures that we can always track the changes that have been made. Normally reports and downloads only represent the current state of the database. It is possible in some reports and download functions to request the data as it was in a certain point in time.

## 2.7 Replacing data by periods

An alternative to the above described 'Updating and deleting records' is to work on all data within a specified period. A provider can replace all records within a specified period with a new batch. The principle of replacing is equivalent to first deleting the information and then uploading a new batch with the replacement data.

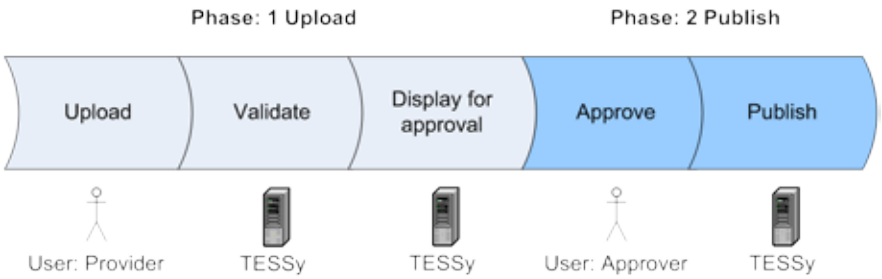
Note: when replacing a period, all current records with DateUsedForStatistics within the period for the record type and data source (surveillance system) are marked as invalid.

## 2.8 Data flow

The data flow can be divided into two phases:

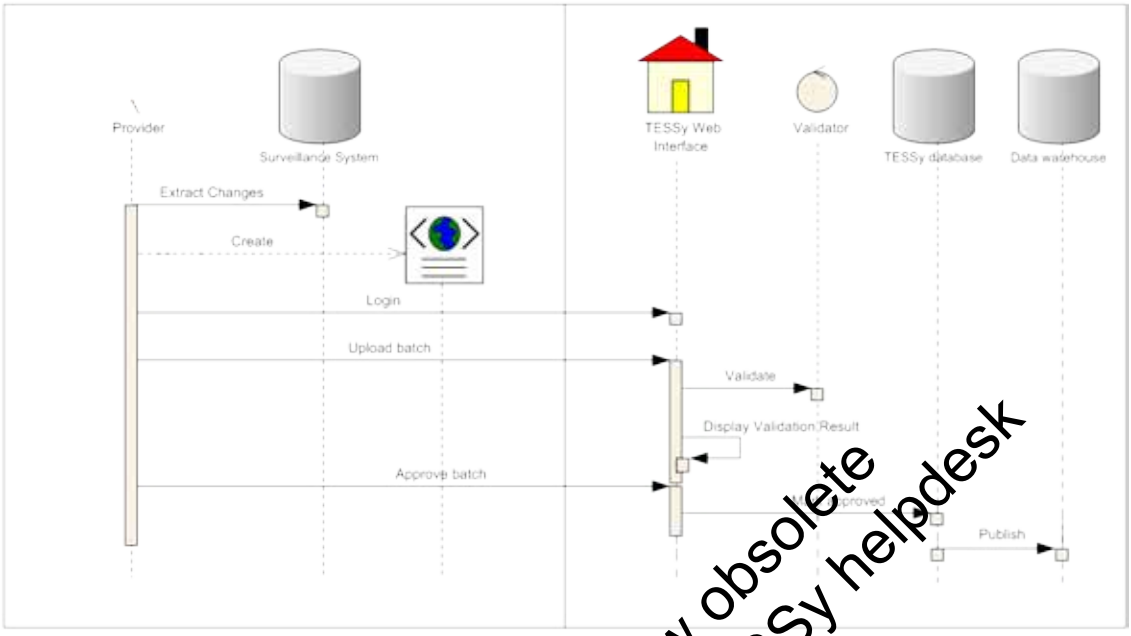
1. A batch is uploaded and TESSy validates its contents. The validation result is listed to the provider and can be revised later.
2. The provider reviews the validation results and chooses to approve or reject the batch. If the batch is approved, then the information is pushed to the data warehouse and is available for reports and queries.

**Figure 1 Conceptual data flow when uploading data to TESSy**



## 2.8.1 Web-based data upload

**Figure 2 Overview of the TESSy upload process**






The following steps are to be performed by the provider:

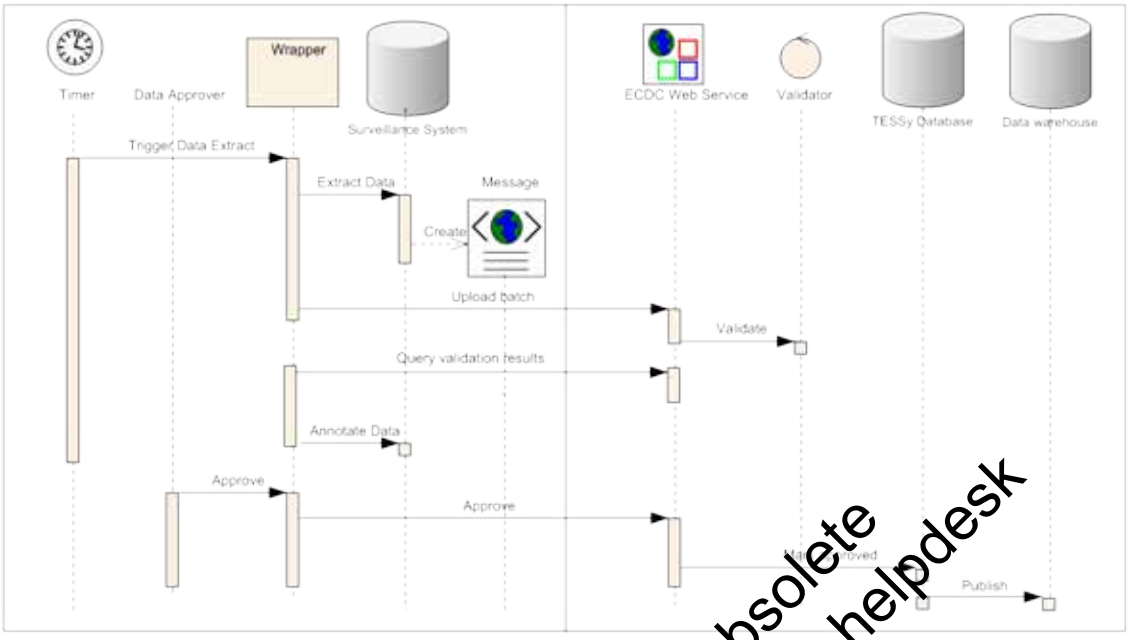
1. The user extracts the requested information from the national surveillance system (database) and creates data transport file according to one of the supported format specifications. The provider can specify a metadata set during upload to define which fields are reported for each record type and subject (disease).
2. The provider logs into the TESSy web interface to upload the file(s) as a batch. In the upload process, the user is asked to update the reporting periods for the diseases to upload. After uploading, the user is redirected to the 'Review Uploads' page.
3. After the batch has been uploaded, TESSy validates the batch content in the background. If any errors are found, the batch is automatically be rejected.
4. After validation, the status of the batch changes to 'Validated' and the user may view the validation result.
5. If the batch has not been automatically rejected, the user has two buttons on the validation result page: one to approve the batch and one to reject the batch. If the user chooses to reject it, the batch is marked invalid and must be uploaded to the system again from step 2. If the user chooses to approve it, the batch is marked as approved.
6. The batch is transferred into the data warehouse in order to be accessible to all users for reports and queries.

## 2.8.2 Web service data exchange

A Web Service interface is available for direct machine communication with TESSy. A Web Service is a standard protocol for machine-to-machine communication that is designed for interoperability and thus does not force any of the communicating parties to use a specific programming language.

For more information, see the document *Web Service Technical Documentation*.

**Figure 3 Overview of the TESSy data exchange by Web Service**




1. The provider has a special application (the Wrapper) that is able to extract data from the national surveillance system (database). Triggered by a Timer (or scheduler), this application extracts data that have been changed since the last data submission and creates a transport file according to the TESSy XML format specification. Note: only the TESSy XML format is supported for Web Service upload.
2. The Wrapper invokes the TESSy Web Service to upload the batch and get a receipt in return.
3. TESSy validates the submitted batch. If any errors are found, the batch is automatically rejected.
4. The Wrapper queries the validation results method (Web Service call) until the validation results are successfully returned. These can be used to annotate data in the surveillance system, for example, a case record can be marked as 'submitted to ECDC' or the rule violations of a record can be stored.
5. Approval of the data can be done in two ways:
    a. using the TESSy web interface, or
    b. house the approval process in the national surveillance system (database). Display the validation results and let a user approve the batch. The Wrapper can then use an approved batch method (Web Service call) to pass on the result to TESSy.
6. The batch is transferred into the data warehouse in order to be accessible to all users for reports and queries.

# 3 Variable coding

The current version of TESSy supports the following data types:

| | |
|---|---|
| String | A sequence of alphanumeric characters of arbitrary length (if not specified otherwise) |
| Date | An ISO 8601 date in the format CCYY-MM-DD |
| Incomplete Date | An ISO 8601 date in the format CCYY-MM-DD or CCYY or CCYY-MM or CCYY-Www (Possible formats can be restricted within the definition of the field) |
| Numeric | A numeric value |
| Coded Value | An item from an enumerated list of allowed values |
| Complex | A field that is composed of two or more sub-fields, for instance a period with a start date and an end date |

## 3.1 String

String (or text) fields are sequences of alphanumeric characters of arbitrary length[1] Since the data transfer files are encoded in Unicode, special characters can be used. For string fields a maximum length can be defined.

In the TESSy CSV format, line breaks and commas are not allowed.

## 3.2 Date

Date formats in TESSy follow the ISO standard ISO 8601:1988 (E) for date and time specifications. This corresponds to the European standard EN 28601. For dates this is CCYY-MM-DD with CCYY the four digit year, MM a two digit month (with leading zero if less than 10) and DD the two digit day of month, for example, 2007-01-17 for 17 January 2007. TESSy requires the hyphens (the ISO standard allows dropping of the hyphens).

TESSy does not support the week & day notation YYYYWww-D to address a single day nor any Julian date specification, that is, CCYY-JJJ, example 2007-234.

## 3.3 Incomplete date

For some date fields the exact day has to be given. For others it might be sufficient to submit 'incomplete information', for example, only the week or the month. Those fields have the data type Incomplete Date. ISO 8601 has a specification for time with reduced precision, but TESSy only supports parts of this.

The following is supported as input to TESSy:

| | |
|---|---|
| CCYY | represents the period of the specified year. Example: 2004 |
| CCYY-MM | represents the period of the month specified. Example: 2006-11 |
| CCYY-Www | represents the period of the week specified. Example: 2005-W23 |
| CCYY-Qq | represents the period of the quarter specified. Example: 2005-Q3 |
| CCYY-MM-DD | represents a complete date. Example: 2007-11-23 |

Note on week incomplete date format[2]: The week number should be calculated according to ISO 8601(1988), European Norm EN 28601 (1992). Meaning that week 01 is the week that contains 4 January, or in other words - the week that contains the first Thursday of the year.



[1] For technical reasons the maximum number of characters is actually 4 000.

[2] See http://en.wikipedia.org/wiki/ISO_8601#Week_dates for more information.

There are mutually equivalent descriptions of week 01:

- the week with the year's first Thursday in it (the formal ISO definition);
- the week with 4 January in it;
- the first week with the majority (four or more) of its days in the starting year; and
- the week starting with the Monday in the period 29 December–4 January.

The week number can be described by counting the Thursdays: week 12 contains the 12th Thursday of the year.

The ISO week-numbering year starts on the first day (Monday) of week 01 and ends on the Sunday before the new ISO year (hence without overlap or gap). It consists of 52 or 53 full weeks. The ISO week-numbering year number deviates from the number of the calendar year (Gregorian year) on a Friday, Saturday, and Sunday, or a Saturday and Sunday, or just a Sunday, at the start of the calendar year (which are at the end of the previous ISO week-numbering year) and a Monday, Tuesday and Wednesday, or a Monday and Tuesday, or just a Monday, at the end of the calendar year (which are in week 01 of the next ISO week-numbering year). For Thursdays, the ISO week-numbering year number is always equal to the calendar year number.

Examples:

2008-12-29 is written '2009-W01'
2010-01-03 is written '2009-W53'

## 3.4 Numeric

Numbers are coded as integers. For a numeric field a range rule can be specified, that is, the value must not be less than a specified minimum, more than a specified maximum, or both.

## 3.5 Coded values

Coded values are items from a predefined list. Most fields in the core set of variables for routine surveillance have the data type Coded Value. For data exchange with TESSy generally a short but meaningful code (mnemonic) is used. Examples for lists of coded values are the countries defined in ISO 3166-1 or sex defined in ISO 5218.

## 3.6 Complex

Complex fields are used to report dependent information in a hierarchical structure. A complex field contains one or more subfields of any type.

The complex data type introduces the possibility for relational data structures in TESSy, for example, a travel-associated Legionnaires' disease case has one or more travel records or that an intensive care unit has many patients.

A complex field is a grouped placeholder for one or more other fields. A record type contains a list of fields, where one or more fields may be of type complex. Each complex field contains, in turn, its own list of fields.

**Example**:

Consider the record type for a travel-associated Legionnaires' disease case, LEGITRAVEL, containing 'normal' fields for the case such as Age, Gender, DateOfOnset, etc. like any other case-based record type. Since the record type is used for travel-associated cases there is also a need to collect the travel history of the case, which is implemented as a complex field, TravelRecord. This complex field contains its own set of fields like the accommodation name and type as well as the date of arrival and departure.

LEGITRAVEL

+ Age (Numeric)
+ Gender (Coded Value)
+ DateOfOnset (Date)
+ TravelRecord (Complex – can be repeated if more than one travel record)
    + AccomName (Text)
    + AccomType (Coded Value)
    + DateOfArrival (Date)
    + DateOfDeparture (Date)

By using this structure, each case reported can contain an individual number of travel records depending on the travel history of the case.

# 4 TESSy CSV specification

This section specifies the TESSy transport file format when using CSV (Comma Separated Value). CSV files lack much of the complexity offered by the XML format, which disqualifies it for use in TESSy Web Services (machine-to-machine communication). Therefore, batches coded in TESSy CSV can only be uploaded using the web interface.

## 4.1 Data to be provided with an upload

For TESSy CSV, there are two separate upload wizards for (1) providing new data or updates to previous data, and (2) replacing a period of data with a new replacement batch. Two types of information must be provided in the wizard apart from the batch (data file):

- Reporting period – The reporting period is managed and updated in the upload wizard (wizard 1 + 2). For more information, see Section 2.2.
- Metadata set – When providing data (wizard 1 + 2) the provider must indicate which metadata set is used. The metadata set is vital for the validation of the batch (For more information, see Section 2.3).
- When replacing a period of data (wizard 2) the provider must indicate which time period, subject (disease) and data source (surveillance system) to replace. All previous records with DateUsedForStatistics within this period are marked as inactive (For more information, see Sections 2.5 and 2.7).

## 4.2 Case sensitivity

Note that the CSV format is case insensitive, for example, 'GR' is the same as 'gr' or 'Gr'. Coded values are usually written in upper case.

## 4.3 Name value pairs

The data in a TESSy CSV file are represented as name-value pairs, where the name is the column header and the value is the row value for that column.

**Example:** A visual example for the name-value concept.

Theoretical model:

```
RecordId, …, FieldName1, FieldName2, …
Row 1, …, [FieldValue1], [FieldValue2], …
Row 2, …, [FieldValue1], [FieldValue2], …
Row 3, …, [FieldValue1], [FieldValue2], …
```

Practical model:

```
RecordId, …, Gender, Age, …
4738283, …, M, 39, …
4858554, …, F, 1, …
4636372, …, F, 79, …
4758463, …, M, 59, …
```

*Note 1*: In the practical example, the FieldName1 is Gender, then [FieldValue1] should be substituted with the coded value for gender, for example, M for Male. The second field is Age, so Fieldname2 is Age and FieldValue2 is substituted with the respective ages of the cases.



## 4.4 Multiple record types in one file

If multiple record types are reported in the same file, then some columns might not be applicable for all record types. Please indicate this by using the code N/A (Not Applicable)[3]. Leaving the field blank is NOT the same as giving N/A and can generate a validation error or warning.

[3] The code IGNORE is also supported for backward compatibility.

**Example:** A visual example for the concept of Not Applicable.

```
RecordId, RecordType, …, SerovarSALM, …
4738283, SALM, …, Typhimurium, …
4858554, SALM, …, Enteritidis, …
4636372, CAMP, …, N/A, …
4758463, MALA, …, N/A, …
```

*Note 1*: All coded values are case insensitive, implying that n/a or ignore are also allowed.

*Note 2:* In this example, the SerovarSalm filed is not applicable for Campylobacter and Malaria cases.

## 4.5 Missing data/Empty fields

It is semantically different to leave a field empty than to indicate it as not applicable.

- Leaving the column (FieldName-FieldValue pair) out: This most likely generates an error or a warning depending on the record type. All values are treated as unknown.
- Leaving a field (FieldValue) empty: The value is treated as unknown. Depending on the validation rules, an error or a warning might be generated.
- Setting the field (FieldValue) to N/A (not applicable): This is equivalent to not providing a field. This code should be used when a field is not defined in the record type version used for the record.

For some fields that are considered extra important, the validation rules require a field to be present. For these fields, a missing value can only be indicated using the code 'UNK'.

**Example:** A visual example of an empty field.

```
RecordId, RecordType, …, Gender, Imported, Age, …
4738283, SALM, …, M, N, 39, …
4858554, SALM, …, F, , 1, …
4636372, SALM, …, F, Y, 79, …
4758463, SALM, …, M, UNK, 59,…
```

*Note 1*: For the second record, the value for the Imported variable is not known and is therefore left empty. This is interpreted as unknown.

*Note 2*: For the fourth record, the value for the Imported variable is UNK, which, like the second record, is treated as unknown.

*Note 3*: In this example, the field Imported has also the option to code.



## 4.6 Repeating fields

If reporting repeating fields, the name-value pair (FieldName – FieldValue) should be repeated. N/A is used for cases where the additional name-value pair is not applicable.

**Example:** A visual example of a repeating field.

```
RecordId, RecordType, …, Imported, ProbableCountryOfInfection, →
ProbableCountryOfInfection, …
4738283, SALM, …, Y, UNK, N/A, …
4858554, SALM, …, Y, US, CA, …
4636372, CAMP, …, N, N/A, N/A, …
4758463, MALA, …, Y, TH, N/A, …
```

*Note 1*: The second record gives both USA and Canada as possible country of infection.

*Note 2*: In the first record, UNK indicates that the case is imported, but visited countries are unknown.

*Note 3*: The third record uses N/A to indicate that the case is not imported.

## 4.7 ZIP compress data or include multiple files in one batch

It is possible to compress the data using ZIP to limit the time required to upload the file to the server or to bundle multiple files together into one batch upload. There are two scenarios which may be combined:

1. For large files (several megabytes), it is recommended to compress the file prior upload. This decreases the time required to send the file from the local machine to the server.
   **Example:** The file BE_SALM_2008.csv can be compressed with ZIP to BE_SALM_2008.zip.

2. Multiple files can be combined in one batch using zip compression. The primary use is when reporting complex record types where each complex field is represented by its own file in addition to a main file, but can also be used to report, for example multiple subjects in one batch.
   When including more than one file in the ZIP file, the files included must comply with the naming convention to start with the following prefix: '[Number].[File name]', for example, '1.Any file name.csv'. This is used to indicate the order to read the files when reporting complex record types. The main file should be ordered with the lowest number and the numbering of correspondent files should follow based on the record type hierarchy.
   **Example 1:** The files '1.FR LEGITRAVEL 2009.csv' and '2.FR LEGITRAVEL TravelRecords 2009.csv' can be combined into the file 'FR LEGITRAVEL 2009.zip'.
   **Example 2:** The files '1.FR SALM 2009.csv', '2.FR BRUC 2009.csv' and '3.FR CAMP 2009.csv' can be combined into the file 'FR Zoonoses 2009.zip'. Note that the file naming convention still applies, even though no complex record type is included.

## 4.8 Case-based report specification (individual data)

This file contains information regarding the cases to report. For aggregated data, see the next section for more details. The content of this file corresponds to the contents of the tag `/TESSyDataUpload/body/recordGroup/records/record` in XML format.

**Suggested file name convention:** [Country]_[Date]_[Subject]_records.csv

**File contents:**

Header (First row):
RecordId, RecordType, RecordTypeVersion, Subject, Status, DataSource, ReportingCountry, →
DateUsedForStatistics, [FieldName 1], [FieldName 2], [FieldName 3], …

Body (Following rows):[4]
[RecordId], [RecordType], [RecordTypeVersion], [Subject], [Status], [DataSource], [ReportingCountry], →
[DateUsedForStatistics], [FieldValue 1], [FieldValue 2], [FieldValue 3], …

**Description:**

| Column name: | Required: | Description: | Data type: |
|---|---|---|---|
| [RecordId] | Yes | Unique identifier for the record (that is, a case identifier). The RecordId can be considered as key within the context of the data source (surveillance system). A record with the same RecordId from the same data source results in an update of this record in TESSy.<br>Data quality feedback is linked to the RecordId.<br>If the record identifier within the national surveillance system database is reused between diseases, please prefix the identifier with disease. | String<br>(Max length: 80) |
| [RecordType] | Yes | The RecordType defines the structure of the sent data. RecordTypes are defined by ECDC. They specify what data values the TESSy system expects to receive.<br>The record type has a relation with the subject. Only valid combinations of record type and subject will be accepted. | Coded Value |
| [RecordTypeVersion] | No | Overrides the metadata set, if specified.<br>There may be more than one version of a record type. This element indicates which version the provider used when generating the batch (data files). | Numeric |
| [Subject] | Yes | The subject of the record, usually the disease that the case was reported with. | Coded Value |

[4] Be sure that the order of the fields is the same as in the header (the first row).

| | | | |
|---|---|---|---|
| [Status] | No | If set to 'NEW/UPDATE', the record is newly entered into the database. If a record with the same RecordId is found, then the record will be replaced with the new information.<br>If set to 'DELETE', the record with the given RecordId is deleted from the TESSy database (or better stated, invalidated). Required information is RecordId, RecordType, Subject, Status and DataSource. All other information is optional for the record.<br>If status is not specified, then all records are assumed as 'NEW/UPDATE'. | Valid values:<br>NEW/UPDATE<br>DELETE |
| [DataSource] | Yes | The data source (surveillance system) that the record originates from. | Coded Value |
| [ReportingCountry] | Yes | The country reporting the record. | Coded Value |
| [DateUsedForStatistics] | Yes<br>Not when DELETE-ing | The key date used for standard reports and the date that is referred to in relation to reporting period | Incomplete Date |
| [FieldName 1, 2, 3...] | - | Disease specific information.<br>Name of the field, for example, 'Gender' | Coded Value |
| [FieldValue 1, 2, 3...] | - | Disease specific information.<br>Data value. No data type is given. The content is interpreted at the TESSy site depending on the type of the field. | Depends on FieldName |

**Example:** Both Malaria and Hepatitis B data are reported in the same file.

```
RecordId, RecordType, RecordTypeVersion, Subject, Status, DataSource, ReportingCountry, →
DateUsedForStatistics, Age, Gender, DateOfNotification, Classification, →
PossibleCountryOfInfection, SpeciesMALA, ImmunisationStatus
GRELO04048, MALA, 1, MALA, NEW/UPDATE, GR-NOTIFIABLE_DISEASES, GR, 2005-11-05, 46, M, →
2005-11-05, CONF, PK, FAL, N/A
GRELO04049, HEPB, 1, HEPB, NEW/UPDATE, GR-NOTIFIABLE_DISEASES, GR, 2005-11-05, 22, F, →
2005-11-04, CONF, N/A, N/A, N
```

*Note 1*: All disease specific fields for both Malaria and Hepatitis B must be included. If the field is not applicable or information is missing, use N/A.

*Note 2:* In this example, both the RecordTypeVersion (if a metadata set was specified) and the Status could have been left out to reduce file complexity.

**Example:** Malaria and Hepatitis B data are reported in separate files.

*File 1:*

```
RecordId, RecordType, RecordTypeVersion, Subject, Status, DataSource, ReportingCountry, →
DateUsedForStatistics, Age, Gender, DateOfNotification, Classification, →
ProbableCountryOfInfection, SpeciesMALA

GRELO04048, MALA, 1, MALA, NEW/UPDATE, GR-NOTIFIABLE_DISEASES, GR, 46, M, 2005-11-05, →
CONF, PK, FAL
```

*File 2:*

```
RecordId, RecordType, RecordTypeVersion, Subject, Status, DataSource, ReportingCountry, →
Age, Gender, DateOfNotification, DateUsedForStatistics, Classification, →
ImmunisationStatus

GRELO04049, HEPB, 1, HEPB, NEW/UPDATE, GR-NOTIFIABLE_DISEASES, GR, 22, F, 2005-11-04, →
2005-11-05, CONF, N
```

*Note 1:* In this example, both the RecordTypeVersion (if a metadata set was specified) and the Status could have been left out to reduce file complexity.

**Example:** One 'NEW/UPDATE' and one 'DELETE' of Hepatitis B in the same file.

```
RecordId, RecordType, RecordTypeVersion, Subject, Status, DataSource, ReportingCountry, →
Age, Gender, DateOfNotification, DateUsedForStatistics, Classification, →
ImmunisationStatus

GRELO04049, HEPB, 1, HEPB, NEW/UPDATE, GR-NOTIFIABLE_DISEASES, GR, 2005-11-05, 22, F, →
2005-11-04, CONF, N

GRELO04829, HEPB, 1, HEPB, DELETE, GR-NOTIFIABLE_DISEASES, GR, N/A, N/A, N/A, N/A, N/A, →
N/A
```

*Note 1*: The status of the second record is set to DELETE, which imply that there must be an existing entry with the record id '`GRELO04829`' in the context of '`GR-NOTIFIABLE_DISEASES`'. This entry will be deleted or more accurately be marked inactive.

*Note 2:* The record that is marked for deletion only specifies the required information. All other fields are marked as not applicable and are left out.

### 4.8.1 Including complex fields

When reporting complex record types, each complex field must be reported as a separate CSV file in addition to the main file complying with the above format specification. The content of this file corresponds to the contents of the tag `/TESSyDataUpload/body/recordGroup/records/record/fields/complexField` in XML format.

**Suggested file name convention [main file]:** 1.[Country]_[Date]_[RecordType].csv

**Suggested file name convention [complex field file]:**
[Number/order].[Country]_[Date]_[RecordType](_[ComplexField])+.csv

**File contents:**

Header (First row):
RecordId, RecordType, ParentId, [FieldName 1], [FieldName 2], [FieldName 3], ...

Body (Following rows):[5]
[RecordId], [RecordType and ComplexField], [ParentId], [FieldValue 1], [FieldValue 2], [FieldValue 3], ...

**Description:**

| Column name: | Required: | Description: | Data type: |
|---|---|---|---|
| [RecordId] | Yes | Same definition as the RecordId in the table above. | String<br>(Max length: 80) |
| [RecordType] | Yes | The RecordType defines the structure of the sent data. For complex fields the record type must comply with the following format: [RecordType]$[ComplexField1]$[ComplexField2]... | Coded Value |
| [ParentId] | Yes | Indicates the parent record in the main file / parent complex file. The value must be exactly equal to the RecordId of the parent record. | Numeric |
| [FieldName 1, 2, 3...] | - | Complex field specific information.<br>Name of the field, for example, 'Gender' | Coded Value |
| [FieldValue 1, 2, 3...] | - | Complex field specific information.<br>Data value. No data type is given. The content is interpreted at the TESSy site depending on the type of the field. | Depends on FieldName |



**Example:** An example of a travel-associated Legionnaires' disease case.

*Main file (name: 1.MT_20070612_LEGITRAVEL.csv):*

```
RecordId, RecordType, Subject, DataSource, ReportingCountry, DateUsedForStatistics, →
Age, DateOfOnset, Gender

4915, LEGITRAVEL, LEGITRAVEL, MT-DISEASE_SURVEILLANCE, MT, 2007-06-12, 8, 2007-05-06, M
```

[5] Be sure that the order of the fields is the same as in the header (the first row).

*Complex field file (name: 2.MT_20070612_LEGITRAVEL_TRAVELRECORD.csv):*

```
RecordId, RecordType, ParentId, ProbableCountryOfInfection, AccommCode, AccommName
1000, LEGITRAVEL$TravelRecord, 4915, US, NEW, Hilton Manhattan
1001, LEGITRAVEL$TravelRecord, 4915, US, NEW, Harlem Hights Inn
```

*Note 1*: The parent identifier in the second file refers to the record id in the main file.

*Note 2:* The value of the RecordType in the second file is LEGITRAVEL$TravelRecord, where LEGITRAVEL is the record type and TravelRecord is the name of the complex field.

**Example:** An example for healthcare-associated data.

*Main file (name: 1.FR_2008_HAISSI.csv):*

```
RecordId, RecordType, Subject, DataSource, ReportingCountry, DateUsedForStatistics, →
HosiptalId, SurgicalUnitId, SurgicalUnitType
4915, HAISSI, SSI, FR-HCAI, FR, 2008, 34, 12, TR
```

*Complex field (level 1) file (name: 2.FR_2008_HAISSI_OPERATION.csv):*

```
RecordId, RecordType, ParentId, Age, Gender, ASAClassification
1000, HAISSI$Operation, 4915, 23, M, NORM
1001, HAISSI$Operation, 4915, 42, F, SDIS
```

*Complex field (level 2) file (name: 3.FR_2008_HAISSI_OPERATION_INFECTION.csv):*

```
RecordId, RecordType, ParentId, SSIType, ResultMicroorg1, SIR_Microorg1
Inf 1, HAISSI$Operation$Infection, 1000, S, STRAUR, R
Inf 2, HAISSI$Operation$Infection, 1000, S, STRPNE, I
Inf 32, HAISSI$Operation$Infection, 1001, D, STRPNE, S
```

*Note 1*: The parent identifier in the second file refers to the record id in the main file and the parent identifier of the third file refers to the record id of the second file.

*Note 2:* The value of the RecordType in the third file is HAISSI$Operation$Infection, where HAISSI is the record type and Operation and Infection is the name of the complex fields.



## 4.9 Aggregated report specification

This file contains information regarding the aggregated data to report. The content of this file corresponds to the contents of the tag `/TESSyDataUpload/body/recordGroup/records/record` in XML format.

Note: the record type normally differs between case based data and aggregated data.

Note: aggregated data can only be replaced using the replace period functionality (see Section 2.7).

**Suggested file name convention:** [Country]_[Date]_[Subject]_aggregated.csv

**File contents:**

First row:

> RecordType, RecordTypeVersion, Subject, DataSource, ReportingCountry, →
> DateUsedForStatistics, [FieldName 1], [FieldName 2], [FieldName 3], …, NumberOfCases

Following rows:

> [RecordType], [RecordTypeVersion], [Subject], [DataSource], [ReportingCountry], → [DateUsedForStatistics], [FieldValue 1], [FieldValue 2], [FieldValue 3], …, [NumberOfCases]

**Description:**

| Column name: | Required: | Description: | Data type: |
|---|---|---|---|
| [RecordType] | Yes | The RecordType defines the structure of the sent data. RecordTypes are defined by ECDC. They specify what data values the TESSy system expects to receive. | Coded Value |
| [RecordTypeVersion] | No | Overrides the metadata set, if specified.<br>There may be more than one version of a record type. This element indicates which version the provider used when generating the batch (data files). | Numeric |
| [Subject] | Yes | The subject of the record, usually the disease that the case was reported with. | Coded Value |
| [DataSource] | Yes | The data source (surveillance system) that the record originates from. | Coded Value |
| [ReportingCountry] | Yes | The country reporting the record. | Coded Value |
| [DateUsedForStatistics] | Yes | The key date used for standard reports and the date that is referred to in relation to reporting period. Defines the aggregated period, for which the field NumberOfCases (or similar named field – defined as a field in the metadata) applies. | Incomplete Date |
| [FieldName 1, 2, 3...] | - | Disease specific information.<br>Name of the field, for example, 'Gender' | Coded Value |
| [FieldValue 1, 2, 3...] | - | Disease specific information.<br>Data value. No data type is given. The content is interpreted at the TESSy site depending on the type of the field. | Depends on FieldName |

**Example:** Aggregated data on malaria is reported

```
RecordType, Subject, DataSource, ReportingCountry, DateUsedForStatistics, Gender, →
Classification, Imported, ProbableCountryOfInfection, NumberOfCases
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,00-04,M,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,05-10,M,CONF,UNK,UNK,1
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,05-10,M,CONF,Y,AF,1
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,10-20,M,CONF,UNK,UNK,2
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,20-30,M,CONF,UNK,UNK,4
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,30-40,M,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,40-50,M,CONF,UNK,UNK,10
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,40-50,M,PROB,UNK,UNK,2
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,50-60,M,CONF,UNK,UNK,6
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,60-70,M,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,70-100,M,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,00-04,F,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,05-10,F,CONF,UNK,UNK,4
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,10-20,F,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,20-30,F,CONF,UNK,UNK,3
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,30-40,F,CONF,UNK,UNK,2
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,40-50,F,CONF,UNK,UNK,10
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,50-60,F,CONF,UNK,UNK,0
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,60-70,F,CONF,UNK,UNK,2
AGGR,MALA,GR-NOTIFIABLE_DISEASES,GR,2007,70-100,F,CONF,UNK,UNK,0
```

*Note 1*: The second and third record share the same age class, gender and date information. The third is more specific since it specifies 'AF' as the possible country of infection. The second is the more generic record which has the remaining cases for this age class, gender and date information.

*Note 2*: The seventh and eighth records (age class 40-50) behave similarly as in note 1.

*Note 3*: DateUsedForStatistics is reported with an incomplete date. In this case all records apply to the whole year of 2007. The incomplete date can also supports months (for example, '2007-01' = January 2007), weeks (for example, '2007-W04' = Fourth week of 2007) and days (for example, '2007-01-15')

# 5 Frequently asked questions and troubleshooting

This section contains some of the commonly asked questions, some common scenarios, and how to solve them.

## 5.1 Frequently asked questions

### 5.1.1 How do I report zero cases of a disease?

The problem with case-based reporting is that it is hard to distinguish between no reports and zero reports. Thus, reporting periods are used For more information, see Section 2.2.

To report zero cases of a disease, include the specified period in the reporting period for the given subject (disease) and data source (surveillance system). Then TESSy knows that the provider reported data, but since no data was supplied, TESSy knows that zero cases have been reported.

Data transfer to TESSy can be done in one of two ways: it can be uploaded manually, via a secure web interface, or fully automated, using a machine-to-machine (Web Service) interface. Data submission by email, the method of data transfer that has been the standard in many surveillance networks, is not supported by TESSy. The reasons for this are related to the complexities posed by authorisation (using digital signatures), automatic data validation and an inability to give direct feedback.

## 5.2 Troubleshooting

During data upload, there are multiple scenarios in which something goes wrong. This section summarises the main issues that can be expected and the recommended actions for the user.

### 5.2.1 Can not see 'Upload data'

The user might not be authorised to perform the requested action. The menu item 'Upload data' or one of its submenu items is missing.

*Contact helpdesk to learn how to update your access rights.*

### 5.2.2 Can not approve data

The user might not be authorised to perform the requested action. There are no buttons to approve or reject a batch in status validated.

*Contact helpdesk to learn how to update your access rights.*

### 5.2.3 Errors in the reporting periods

The user can update the existing reporting periods in one of two ways:

1. Update the periods manually in the web interface (only applicable for the TESSy CSV format).
2. Include the reporting periods in the data file (only applicable for the TESSy XML format).

Any reduction of a reporting period generates an error. The reporting periods are only allowed to grow (the user can of course choose not to update the periods and thus keep the existing periods).

*Change the reporting periods so that the reporting periods are not shortened. If a reporting period for any reason needs to be shortened, please contact helpdesk.*

### 5.2.4 The batch is automatically rejected

If any severe error is found in the validation, the batch is automatically rejected. The details of the errors found can be listed in the 'Validation result' page.

*Fix the cause of the error and resubmit the batch.*

### 5.2.5 System Errors

This is a group of errors that cannot be solved by the user and are displayed to the user via an error screen.

*Always contact helpdesk.*

# Appendix A: Example files

## Case-based reporting

```
RecordId,RecordType,Subject,DataSource,ReportingCountry,DateUsedForStatistics,Age,Gender, →
Classification,DateOfNotification,SerogroupOEHEC,SerovarSALM,SpecieCAMP
0104732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-01-04,2,M,CONF,2006-01-04,N/A,N/A,JEJ
0264732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-01-06,44,M,CONF,2006-01-06,N/A,N/A,JEJ
0274732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-01-06,2,M,CONF,2006-01-06,N/A,N/A,JEJ
0534732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-01-12,47,M,CONF,2006-01-12,N/A,N/A,JEJ
0684732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-01-17,3,F,CONF,2006-01-17,N/A,N/A,JEJ
0924732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-02-06,1,M,CONF,2006-02-06,N/A,N/A,JEJ
1054732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-02-09,73,F,CONF,2006-02-09,N/A,N/A,COL
1224732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-02-17,63,F,CONF,2006-02-17,N/A,N/A,COL
1504732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-09,2,M,CONF,2006-03-09,N/A,N/A,JEJ
1514732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-09,68,F,CONF,2006-03-09,N/A,N/A,JEJ
1574732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-15,38,F,CONF,2006-03-15,N/A,N/A,JEJ
1744732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-23,28,F,CONF,2006-03-23,N/A,N/A,U
1754732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-23,1,F,CONF,2006-03-23,N/A,N/A,U
1764732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-03-23,73,M,CONF,2006-03-23,N/A,N/A,U
8174732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-12,13,M,CONF,2006-12-12,N/A,N/A,JEJ
8434732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-21,4,M,CONF,2006-12-21,N/A,N/A,JEJ
8444732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-21,1,M,CONF,2006-12-21,N/A,N/A,JEJ
8454732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-21,0,M,CONF,2006-12-21,N/A,N/A,JEJ
8464732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-21,23,M,CONF,2006-12-21,N/A,N/A,O
8514732,CAMP,CAMP,MT-DISEASE_SURVEILLANCE,MT,2006-12-21,1,M,CONF,2006-12-21,N/A,N/A,JEJ
0084732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-01-04,2,F,CONF,2006-01-04,O157,N/A,N/A
0544732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-01-12,0,F,CONF,2006-01-12,O127,N/A,N/A
2374732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-04-20,2,F,CONF,2006-04-20,O127,N/A,N/A
2474732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-04-25,2,M,CONF,2006-04-25,O111,N/A,N/A
2734732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-05-11,1,F,CONF,2006-05-11,O128,N/A,N/A
3204732,EHEC,EHEC,MT-DISEASE_SURVEILLANCE,MT,2006-06-01,0,F,CONF,2006-06-01,N/A,N/A,N/A
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3814732,SALM,SALM,MT-DISEASE_SURVEILLANCE,MT,2006-06-19,1,F,CONF,2006-06-19,N/A,Enteritidis,N/A
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## Aggregated reporting

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DateUsedForStatistics,AgeClass,Gender,Classification,SerovarSALM,NumberOfCases
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,Enteritidis,58
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,Hadar,1
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,Infantis,4
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,Typhimurium,4
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,IGNORE,5
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,0,U,CONF,Virchow,2
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Colindale,1
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Hadar,2
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Infantis,4
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Saintpaul,1
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Stanleyville,1
AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,1,U,CONF,Typhimurium,1
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,4,U,CONF,Infantis,1
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AGGR,SALM,PL-NATIONAL_SURVEILLANCE,PL,2006,60+,U,CONF,Hadar,1
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