

MCDS User Guide

Result of Activity 4

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1. Summary

The Document help MCDS administrators and users to use MCDS software. It is a general description on how the MCDS works and should be configured. In more precise description on MCDS features can be find in the MCDS Specification and in the MCDS API documentation.

1. MCDS development environment settings

Development URLs are:

- 1) Description of the Services API, in Swagger format
- <https://212.47.217.121/dev/doc/apidoc> - free access for anyone with IP-based access rights. To gain access, the user's static IP address must be provided to the MCDS administrator.
- 2) MCDS - <https://212.47.217.121/dev/mcds> - access with a certificate issued by the MCDS administrator.
- 3) Use case descriptions: https://drive.google.com/drive/u/1/folders/1eWV_g9ZCKuOI0-B1lsLjZ1t41nPfk2Qo .
- 4) Test reports: https://drive.google.com/drive/u/1/folders/1L5VNfbF_y-y77mVf5gf8bE2jfQq6v2Mw .

To test the API, you need a program like Insomnia: <https://insomnia.rest/> , Postman <https://www.postman.com/>, or something else that allows you to use the REST API .

To obtain the certificate, the following information must be submitted to the MCDS administrator (Tieto EVRY contact):

- 1) Company name and registration code.
- 2) Address.
- 3) Contact.
- 4) The personal identification code of the contact person in whose name the document (.crt , and .key) is encrypted and the e-mail address.
- 5) Information on whether there is a desire to test with one or more users. If you want to test with several users, you need several certificates.

The certificate is ERP based. ERP is responsible for authenticating ERP users.

Creating a new ERP in the system is the activity of the MCDS administrator (during the development of TIETO EVRY). Only Tieto EVRY architect can add a new user or ERP. This also involves issuing a new certificate for the new ERP. The certificate is made according to the ERP code created by the base. ERP code should be COMPANY NAME.

ERP code can be found in .crt file. The file must be opened and select the Detail tab, where the ERP code can be found under Subject in the CN field.

2. ERP permission management in MCDS

The MCDS administrator needs to configure the permissions of ERP or other systems using MCDS */manage/permissions* service, the input of which is:

{



```
" erpCode ": "string",  
" regNr ": "string",  
" businessArea ": "string",  
" reportType ": "string",  
" active ": true  
}
```

ERP code and company registration number relationship expresses the right of the ERP to send the records of a given company to the MCDS and read them from there. In addition, it is possible to restrict the rights to the company by the field of activity and the type of report. Accordingly, ERP can only deal with field-specific records or specific reports.

The API description includes additional information on rights management services.

3. Managing classifications in MCDS

Classifiers in MCDS are managed by the MCDS administrator. In addition, Statistics Estonia is queried periodically via Statistics Estonia's web service. From there, MCDS automatically updates all classifications in the MCDS database, related to Statistics Estonia. MCDS include system classifications, reports related classifications and accounting entry standard related classifications. Classifications can be queried by ERP from MCDS with the following services:

- 1) */manage/classifier/list/all.*
- 2) */manage/classifier/items/{classifierCode}/{versionCode}.*

It is not possible for ERP to send classifiers to MCDS.

4. Transfer of accounting entries to MCDS

Entries are passed to MCDS */xbrl/entries/add*. The XBRL GL record to be submitted must conform to the accounting record standard located here:

<https://drive.google.com/file/d/1pWB8EwbWW73XPDXP65cq36JuNTql8cJu/view?usp=sharing>

A prerequisite for the submitting reports to MCDS, is authorization of the ERP to use specific company data. The MCDS administrator must configure permissions using the */manage/permissions* service.

It is important that for the report generation to work, the record needs to include references to all the dimensions used in the report. See the report generation rules for details.

5. Creating and transmitting e-invoices via MCDS

An e-invoice that is to be transmitted via the e-invoice operator to the invoice recipient must be transmitted to the MCDS as an accounting entry with the value *gl-*

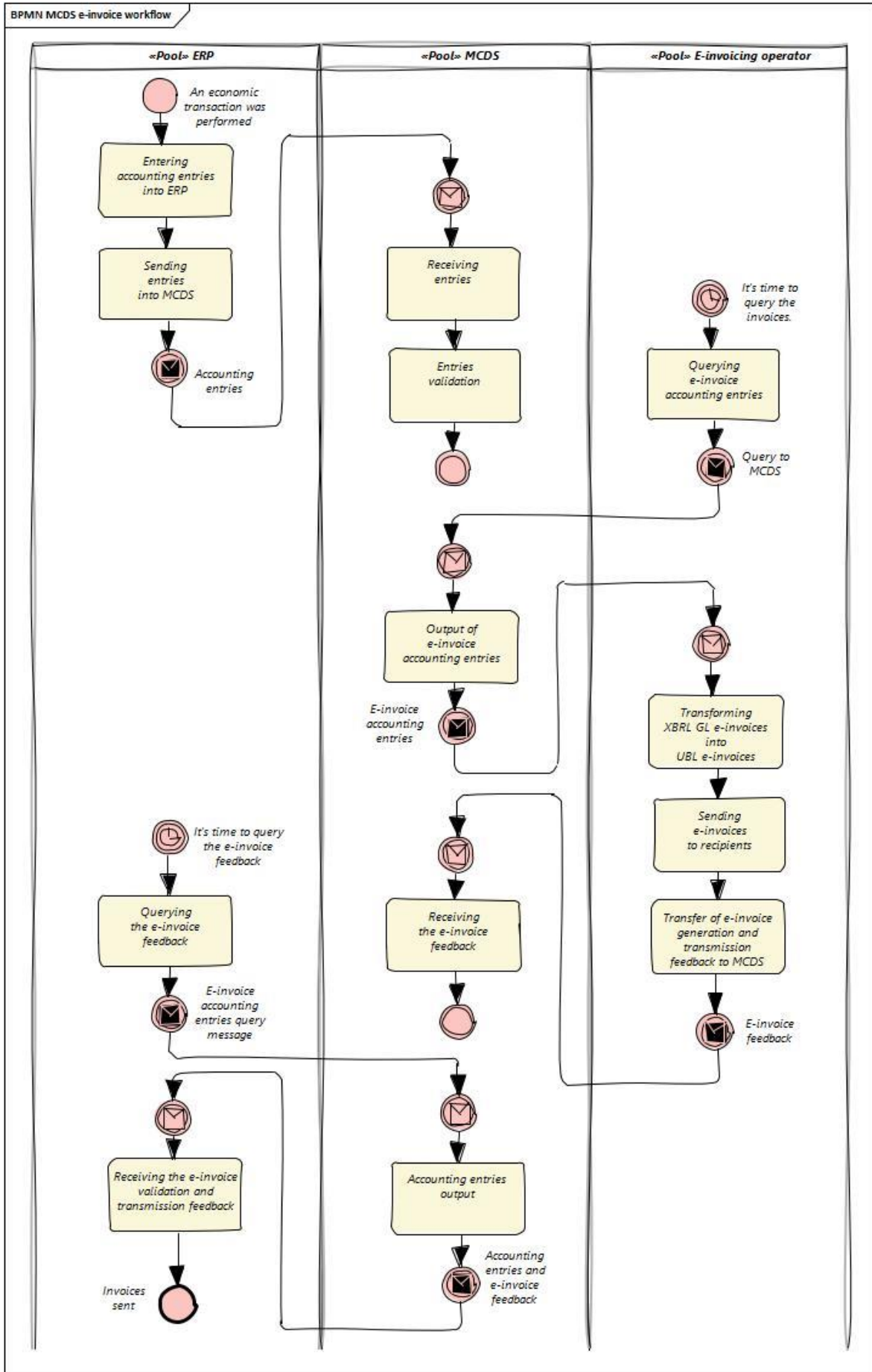


bus: targetApplication being 'e- invoicing_operator '. The transmission of e-invoices to the MCDS takes place through the service.

If such an entry is transmitted to the MCDS, it will automatically become visible to the MCDS e-invoicing operator.

E-invoice operator will ask you to e-invoices MCDS- is the service */invoice/entries* through and sends back e-invoice processing and transmission feedback using service */invoice/feedback*. As feedback, the operator provides the e-invoice xml, status and other information that may be important to the e-invoice issuer. The processing of e-invoice in MCDS is characterized by the following scheme:





6. Transmission of (public sector) reports via MCDS

The following options are available for receiving reports via MCDS:

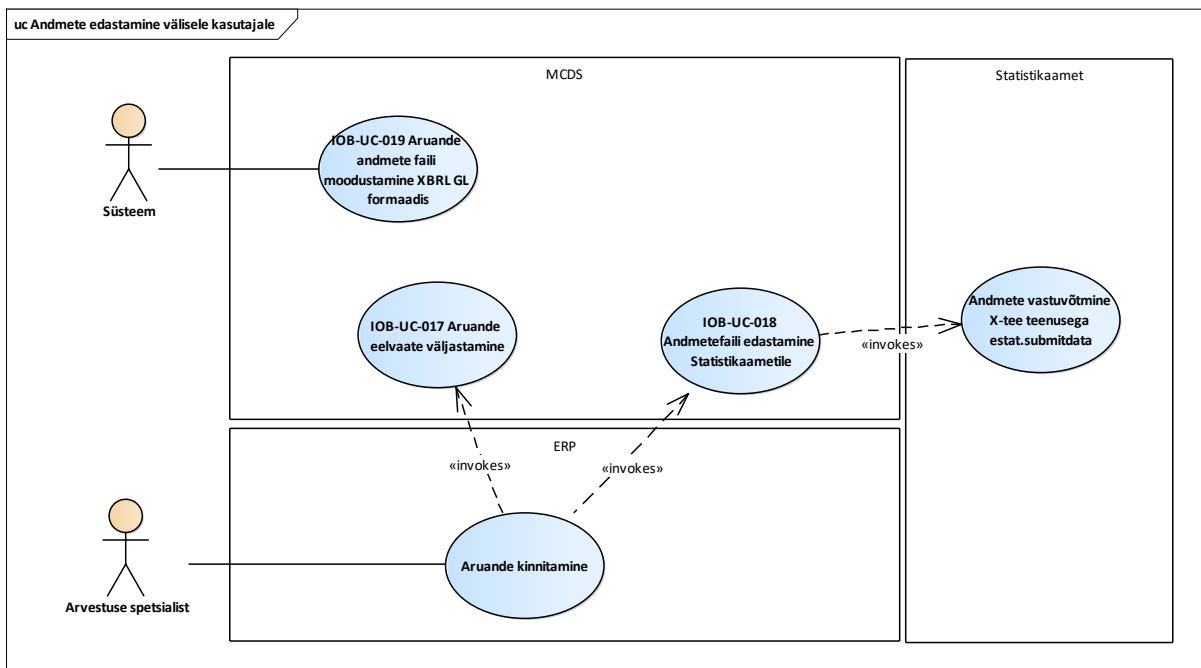
- 1) The report user views the report from the MCDS (pull method).
- 2) The MCDS sends the report to the user (push method).

In the first case, the user can use MCDS using services `/report/preview/{id}`, having received prior from MCDS a list of reports via service `/report/status/`. The user must also have a certificate for the use of MCDS services.

In the second case, MCDS must be configured to use the service of the recipient of the report, for example, in the case of Statistics Estonia, the X-Road service of `estat`. In this case, the MCDS sends an XBRL file with GL records to the recipient of the report.

MCDS 1.0 has developed an interface for the transmission of the salary and labor force report of Statistics Estonia, which uses the push method for the transmission of the report. The remaining public sector reports cannot yet be transmitted via the MCDS. However, it is possible to give access to data to any public authority and it can request the necessary data using the pull method. However, the MCDS only transmits reports to which the data owner has given access. The authority must be given access to the relevant type of report. Access must be granted separately for each company.

The following use case diagram characterizes the transmission of a report to Statistics Estonia:



7. How does MCDS decide whether to generate a report?

If **force = false** is input to the `/report/generate` service, a new report is generated in any case, regardless of other circumstances. The checks described below must be considered that *force true* also has an effect there. If a report already existed, it will not be overwritten, a completely new report will be created.

The system loads *metadata* corresponding to the type of report from the database and presets, among other things, the dates in it (start and end of the period to be generated, date of generation, date of dispatch, etc.). By default, this is done on the basis of the current date, but if the date of an earlier period is given via REST, it is set accordingly.

Based on *metadata*, it is decided whether it is necessary to generate. For example, if the report type parameter *u* is told to a MONTH type report that the generation time is 5 days after the end of the previous period, but the process starts on the 3rd day, then the process is aborted. However, if, for example, the previous period has been determined by force, then on the 3rd day, more than five days have passed since the end of the previous period and the process continues.

The database will find reports for the same period, of the same type and with the same authority, whose last valid status is not "GENERATED" or "SUBMITTED". If no records are found, the report is started.

If the report was in the database, check whether the line items in the database with a few *entryDetail/postingDate* value drops generated by the period in which the creation of a database record is the later of the time the previous report, and which *sourceJournalId* equal to the value determined according to a report in the description. If such reports are found, the report is generated again.

8. Report generation rules

Briefly, the rules for generating a report in MCDS are as follows:

- 1) When the generation of a report is started, a database report is generated regardless of whether or not there were corresponding entries in the reporting period. In the latter case, a report containing only the headers may be generated.
- 2) The report template is loaded from the file system from the location specified in the MCDS configuration.
- 3) The data in the header is exchanged with the appropriate ones.
- 4) Entries are loaded from the database whose *sourceJournalId* is equal to the one specified in the description of the respective report type (STAT_SALARY must be "jc") and which contains at least one *entryDetail/postingDate* value that remains in the generated period.
- 5) For each record found, the compliance of the record content with the rules of the report to be compiled is validated using the *xbrl-gl* content stored in the record. The validation rules are:
 - a. Checking the value of *gl-cor:entryHeader/gl-cor:sourceJournalId* (STAT_SALARY must be "jc").
 - b. Check that *xbrl-gl* contains at least one *gl-cor:entryHeader/gl-cor:entryDetail/gl-cor:accountSub* element.
 - c. Check that the database contains the *gl-cor:entryHeader/gl-cor:entryDetail/gl-cor:accountSub/gl-cor:accountSubType* classification and that it has a classification element with a code equal to *gl-cor:entryHeader/gl-cor:entryDetail/gl-cor:accountSub/gl-cor:accountSubID*. In the absence of such a classification or element, a warning is assigned.



If the checks are not passed (warning does not prevent passing), the corresponding record is ignored and is not included in the report.

After performing the checks, the `gl-cor:entryHeader` element in the xml of the record to be processed is copied with the content into the report. No changes are made inside `gl-cor:entryHeader`.

After all records have been processed, the report is saved.

It is possible to define additional reports in MCDS without developing the system. The report must be included in the classification of report types and records with the corresponding dimensions must be included. Existing records in the MCDS database cannot be modified through the services. Entries can only be added.

9. MCDS status monitoring

The operation of the MCDS can be monitored using the `/system/health` service. Additionally, it is possible to query the system activity log with the `/manage/eventLog` service.

