Integration overview, import formats, and Web service methods in Xledger

Revision 2019-05-21

Table of contents

1. Changelog

This section will contain information about revision changes in the documentation.

Date added	Element	Event	Change	Comment
2019-02-06	**Added/updated Web Service methods:** **Get Budget Details** **Get General Ledger Updates** **Get Link Values** **Get Payroll Summary** **Get Supplier Balances** **Get Workflow Journal Headers** **Get Workflow Journal Headers Simple**	Routine update	New Web Services added to the overview	
2019-02-06	**Added/updated import definitions:** **GL02H** **GL11b** **OVI** **LG08TMP** **SO01b_2** **SO03** **SO04** **HR09** **PR01-3** **RM02**	Routine update	New import formats added to the overview.	
21.05.2019	**N/A**	Change in policy	Added section 1.6: Information about data traffic in Xledger	Added information regarding newly implemented changes w/ data traffic invoicing

2. General introduction

This section aims to provide an overview of the guiding principles for integrations in Xledger.

2.1 Importing to Xledger

Importing to Xledger is for the most part done by CSV-files. These can either be *automatically imported through the API* or uploaded by the end user manually within the system GUI.

Xledger has a wide variety of different import formats corresponding with the various modules featured in Xledger. An overview of these can be found in this document, starting *here*.

Documentation of the import formats in Xledger are provided to customers and prospects on demand. The documentation consists of a record description in a .docx format as well as a sample file in .csv-format.

Xledger also support XML imports to certain modules, and will implement more XML-based import formats in the future.

In May 2018, Xledger added a GraphQL API that allows for direct data entry into the database. See section 1.5.

2.1.1 Automated import

For automated import of files to Xledger, there are two main alternatives that can be used:

1. ReceiveFile Web Service method:
   This is a Web Service call (SOAP) where the method call is used to directly upload a file to the system. The method call needs to contain information about i.e. which entity it should be uploaded to, what import definition the file is to be read as etc.

   The advantage with using this approach is that it can facilitate a direct export from the source system to Xledger without having to use/maintain an external service (such as Xledger Folder Service). The potential disadvantage is that it needs to be coded by someone with technical proficiency.

2. Xledger Folder Service:
   This is an internally developed application/service that can be installed on a client or server. It will monitor a given directory on the client or server and – if configured correctly – automatically upload any file placed in aforementioned directory to its target entity in Xledger. Folder Service is common in regards to for instance uploading End-of-day reports from cashier systems. One single Folder Service installation can serve a vast amount of entities in Xledger simultaneously.

   The advantage of using this approach is that it is relatively easy to set up – the installation requires no programming skills. The potential disadvantage is that the Folder Service becomes an additional part of the process chain.

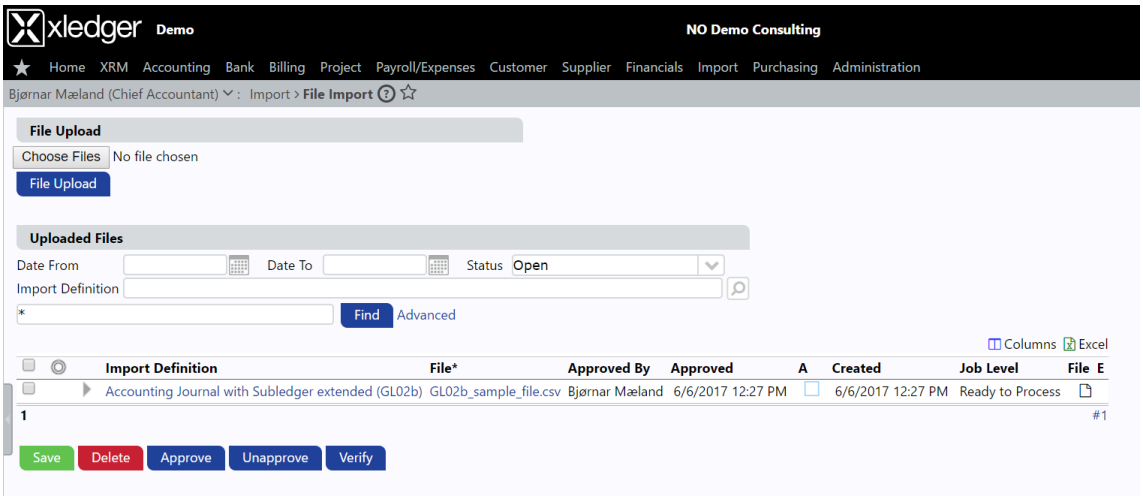
2.2 The role of automated processes

After a file has been uploaded to Xledger via the API, it will be ready for processing. Once the central server job for file processing is executed, the file's content can be found in the module corresponding with its content type (i.e. customer registry).

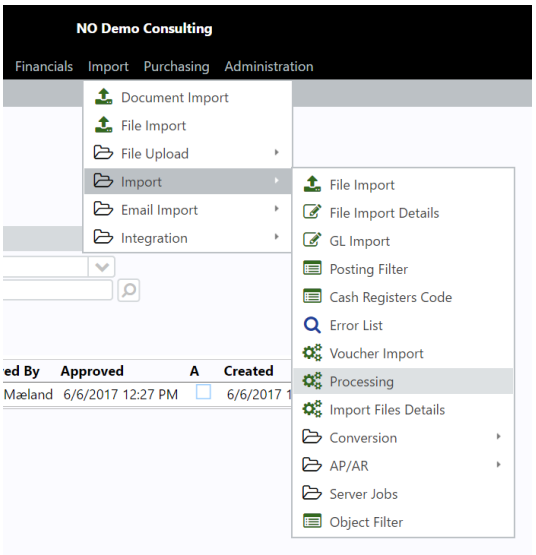
The central server job is run on scheduled intervals numerous time during the course of a day. Users with a sufficiently advanced access may also order this server job on demand. **Please note that the DEMO and TEST environments does not feature the same automated processing. As such, the processes need to be executed manually. See procedure description below.**

2.2.1 Procedure

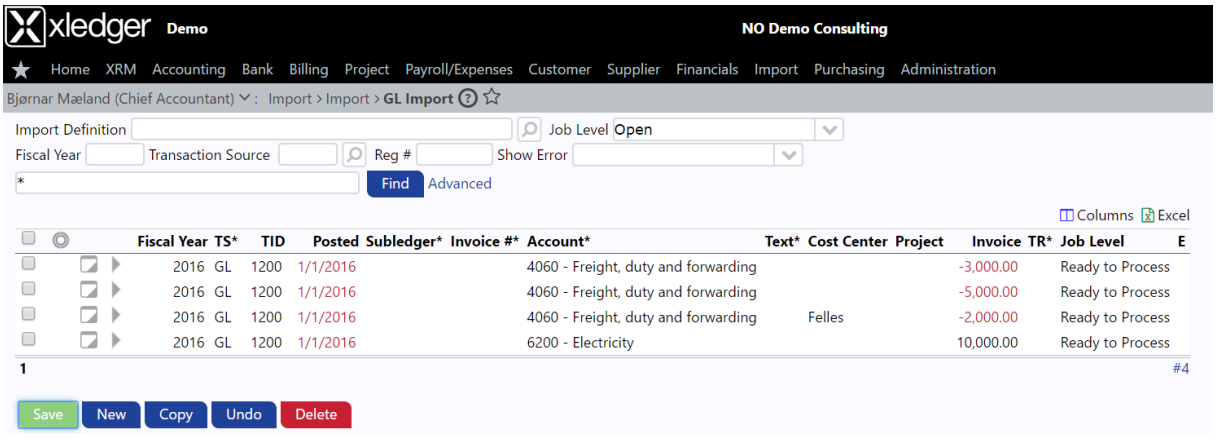
1. A file has been imported and is in the state "Ready to process". In the production environment, it will be processed further with the next execution of a central process. In DEMO, the server job needs to be executed manually.



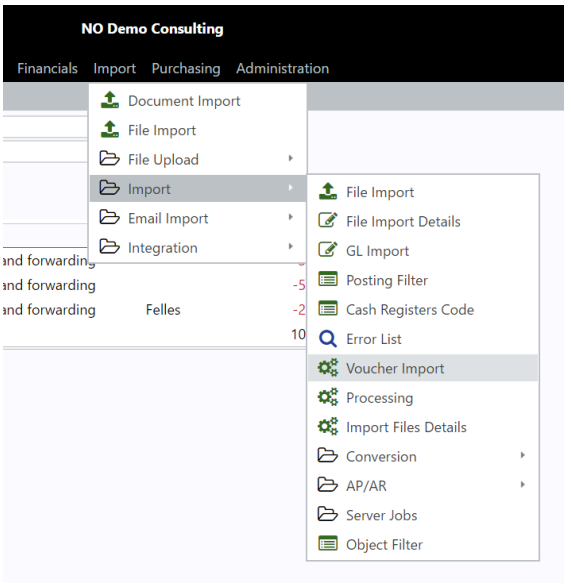
2. The server job is called “Processing”. Depending on the type of format and its content, the data will or will not need additional processing before reaching its destination module in Xledger. For instance, a format which will make accounting vouchers (GL02b, AR10, XI10 etc.) will reach the accounting module via “GL Import”. Data coming from customer or supplier import format (AR02, AP02) will on the other hand be loaded directly into the registries.



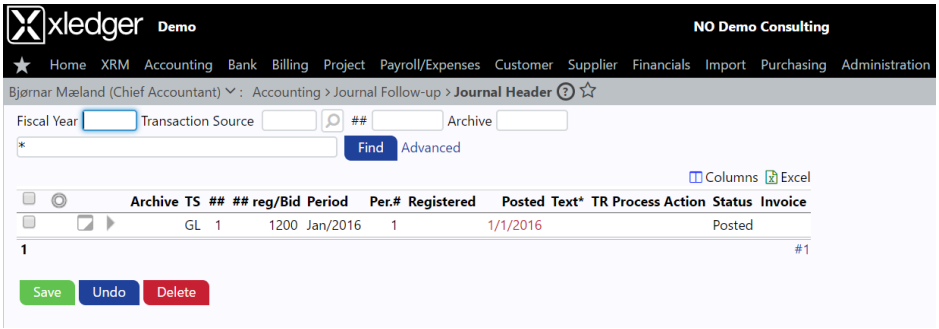
3. For this example, a GL02b file containing general ledger transactions was imported. The rows are thus located in a staging area called GL Import prior to being processed into the general ledger.



4. The server job that ensures transfer from GL Import into the accounting module is called Voucher Import. It performs certain validations such as whether the accounts used are valid and whether mandatory information (varies based on account type) is provided. If not, the rows affected by this will show in the GL Import screen with an icon indicating an error. If all the necessary data is provided, the voucher will be accessible from the accounting module.



5. When the Voucher Import job is finalized, the voucher is shown in the general ledger. If the amounts etc. match from an accounting perspective, the voucher is automatically posted. If there is discrepancies between debits and credits and the voucher does not add up, it will require manual follow-up in the Journal Entry list.



2.3 Exporting from Xledger

There are two main ways to export data from a Xledger Entity:

1. In-GUI exports:
   The majority of Xledgers menus and rows may be exported on-demand from within the graphical user interface. The columns and amount of rows can be customized prior to export. The data is exported in a Excel format. In addition, there are also certain server jobs that can be executed in order to export large amounts of data. This is the best option for one-time exports.

2. Web Service exports:
   Xledger supports a large variety of export methods (SOAP) that allows for extraction of data i.e. for use in external systems. A list of all available export methods can be found *here*. The

data selection can be narrowed by numerous filters that can easily be added to the method call parameters. The data return is in XML format. Web Service exports is the best option for recurring exports.

3. GraphQL:
   See section 1.5.

2.4 Existing integrations Xledger <-> External systems

Xledger is already integrated with numerous systems that either extract or import data into the system. This includes i.e. cashier systems, invoicing systems, CRM systems, web shops, annual report systems and more. We are continuously updating our overview of existing integrations – feel free to contact support@xledger.net for inquiries about any specific system.

We also collaborate closely with integration partner *ConnectMyApps*, who are highly experienced with the Xledger API. Should you require a new integration currently not supported, *ConnectMyApps* can help establishing this integration.

2.5 GraphQL

From May 2018, Xledger added a GraphQL API, which opens up for a lot of new integration capabilities. GraphQL is a data query language developed internally by Facebook in 2012 before being publicly released in 2015. It provides an alternative to REST and ad-hoc web service architectures. In addition to supporting more tailored queries, it also allows for direct data entry into Xledger without the need for a file-based integration architecture.

For more in-depth information about the GraphQL API, please see the standalone documentation.

2.6 Information about data traffic in Xledger

2.6.1 Background

As of Q1 2019, usage of Web Services and the GraphQL API will be invoiceable. The primary reason for charging for data traffic is to incentivize sensible usage, as we have in numerous occasions experienced extremely high loads on the system. In the utmost of cases, this is highly unnecessary; we find it rather unlikely that anyone have a need for a complete export of their general ledger transactions for all years returned every 5 seconds (which has been the case quite more than once).

By implementing this, we are aligning with major actors such as Microsoft and Amazon. Both have quite extensive price lists for data traffic.

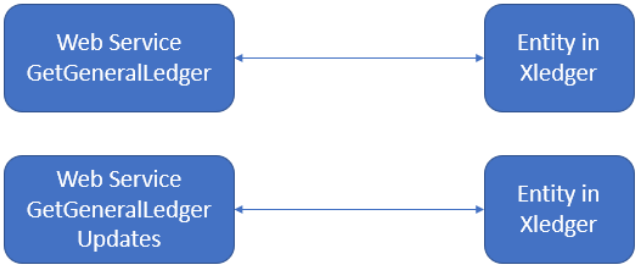
2.6.2 Focus on sensible usage of data traffic

The key to achieving sensible data traffic usage is to only ask for either new or changed data. Just about all the Web Service and GraphQL queries allows for filtering on modified date. Applying this will allow for only fetching data since the last query, which naturally will return significantly less data than a complete export of the dataset. For General Ledger transactions, we have a dedicated query called GetGeneralLedgerUpdates that we recommend using.

The general recommendation: Aspire to fetch only the data you need and little else.

We acknowledge that for many customers, data traffic is not something that's on the forefront of their minds. As such, a certain level of lenience in the transition period can be expected from our part. It is however important to stress that in the end, the customer is responsible for the data traffic caused by the integrations and the 3rd parties that operate them.

The image below illustrates the volume difference between sub-optimal and sensible querying.



- Unfiltered General Ledger query. Will return all transactions across all years on this entity and anyone below it in the hierarchy.
- 92.1 MB in data traffic

- Returns only transactions that are new or modified within the last 7 days on this entity and anyone below it in the hierarchy.
- 0.2 MB in data traffic

3. Web service Export methods

3.1 Get Approval Tasks Summary

From Menu path: Task list (Oppgaveliste)
Returns exclusively voucher approval related-tasks from the Task list in the left menu of the Xledger interface. In the method call, User ID (username in Xledger) and Menu group must be amongst the parameters. The value in Menu Group is that of access roles in Xledger. Examples of Role code values are the following here:

- 1302: Finansleder / Finance Manager
- 1303: Ansatt / Employee
- 1304: Regnskapsfører / Accountant

The user account (User ID) must have access to the chosen role on the entity if this method is to be used.

3.2 Get Bank Disposals

From Menu path: Home (Hjem)
Returns data from the Cash Flow (Likviditet) block on the Home menu.

3.3 Get Budget Details

From Menu path: Financials > Budget > Budget Registration
Returns budget rows as XML elements.

3.4 Get Customer Balances

From Menu path: Customer > Aging – Open items (Kunde > Fakturaoppfølging)
Returns data regarding invoices whose Due date has passed. Data return is grouped per customer.

3.5 Get Customer Transactions

From Menu path: Customer > Customer Transactions > Transactions by Customer (Kunde > Kundetransaksjoner)
Returns customer transactions. By setting DataOption / eOption to value = 1, it will exclusively return open items.

3.6 Get Customers

From Menu path: Customer > Customers (Kunde > Kunderegister)
Returns data from the entity's customer registry.

3.7 Get Customers 2

From Menu path: Customer > Customers (Kunde > Kunderegister)
Same as Get Customers, but with a more extensive data return.

3.8 Get Debt Collection Item Details

Returns detailed data regarding invoices that has been transferred to collection. This method is primarily meant for collection agencies.

3.9 Get Debt Collection Items

Returns detailed data regarding invoices that has been transferred to collection. This method is primarily meant for collection agencies.

3.10 Get Debt Payment Items

Returns payment details related to the above export methods. This method is primarily meant for collection agencies.

3.11 Get Employee Balances

Not operational at present time.

3.12 Get Employee Details

From Menu path: Payroll/Expenses > Employees and Payroll/Expenses > Employees > Employee Position (Lønn/Reise > Ansatte og Lønn/Reise > Ansatte > Stillinger Ansatte)
Returns basic information about employees as well as their linked position(s). Could be viewed as a combination of Get Employees and Get Employee Positions.

3.13 Get Employee Positions

From Menu path: Payroll/Expenses > Employees > Employee Position (Lønn/Reise > Ansatte > Stillinger Ansatte)
Returns data regarding employee position(s).

3.14 Get Employees

From Menu path: Payroll/Expenses > Employees (Lønn/Reise > Ansatte)
Returns data from the employee registry.

3.15 Get Entities

From Menu path: Admininistration > Entity (Administrasjon > Enhet)
Returns data regarding entities in the hierarchy. The method is primarily meant to be used at a Domain/Holding Entity to give an overview of the underlying entities. The method can be used to return Entity Code (Eier ID) on underlying entities – the code will be returned in the field <OwnerCode>.

3.16 Get Exchange Rates

From Menu path: Administration > Setup > Currency > Rates (Administrasjon > Oppsett > Valuta > Vekslingskurser)
Returns data regarding currency rates. In Xledger, the rates will be imported daily at 17.00 CET. It is highly recommended that you use the DateFrom filter to receive the latest rate. Please note that there is no daily update in the XLEDGERTEST application.

3.17 Get File Imports

From Menu path: Import > File Import (Forsystem > Filimport)
Returns status of import files that is scheduled to be imported or already have been processed. It can be used as a validation of whether ones own export files has been processed. Status is returned in <Joblevel> and can be the following:

a. Draft/Kladd – The file requires approval from user. After approval its status will be changed to "Ready to process".
b. Ready to process/Klar til kjøring – The file will be processed the next time the server job «Processing» runs (either manually or as scheduled in the system). **This is the default value when importing files through Web Services.**
c. Processing /Under kjøring – The file is being processed at the very moment.
d. Processed/Kjørt – The file has been processed and has found its way into the system in accordance with the import format definition.
e. Failed/Feilet – The file import has failed due to i.e. formatting error (no. of columns, date format etc.). This is a clear indication that there is an error in the file that should be examined as it prohibits data import.

3.18 Get Financial Ratio

From Menu path: Home (Hjem)
Returns data from the block "Key Performance Indicators" (Nøkkeltall) on the Home menu. KPI's can be defined per entity in Xledger.

3.19 Get General Ledger

From Menu path: Financials > Transactions (Økonomi > Transaksjoner)
Returns all General Ledger transactions. Due to a (usually) quite large volume, users are recommended to actively use filtering when working with this export method.

3.20 Get General Ledger Balance

Returns General Ledger transactions on balance accounts exclusively.

3.21 Get General Ledger Profit and Loss

Returns General Ledger transactions on P&L accounts exclusively.

3.22 Get General Ledger Updates

Returns only General Ledger transactions updated recently.

3.23 Get Journal Headers

From Menu path: Accounting > Journal Follow-up > Journal Header (Regnskap > Bilagsoppfølging > Bilagshode)
Returns data regarding vouchers on a header level. The parameter “Include File Content” allows for extracting the voucher image in a base64-encoded format.

3.24 Get Link Values

From Menu path: Administration > Objects > Link Values
Returns Link Values active on the current entity. Can be information such as Employee Manager relationships, Cost Center Managers, Project Managers a.s.o.

3.25 Get Link Values By Project Access

Returns employees’ project access. Corresponding Menu path in Xledger is Administration > Objects > Link Values with Link “Employees on Project”.

3.26 Get New Users

Not operational per 2019-02.

3.27 Get Object Values

See dedicated section on *Objects*.

3.28 Get Object Values Customers

Returns GUID value on customers.

3.29 Get Object Values Suppliers

Returns GUID value on suppliers.

3.30 Get Objects

See dedicated section on *Objects*.

3.31 Get Open Items AP Aging

From Menu path: Home (Hjem)
Returns data from Accounts Payable in the block Subledger Open Items at the Home page.

3.32 Get Open Items AR

From Menu path: Customer > Customer Transactions > Open Items (Kunde > Kundetransaksjoner > Åpne poster)
Returns data on open customer transactions. In that regard it is not very dissimilar to Get Customer Transactions. Alternative DataOption / eOption setting (value = 2, value = 3) will be able to provide historical insights.

3.33 Get Open Items AR Aging

From Menu path: Home (Hjem)
Returns data from Account Receivable in the block Subledger Open Items at the Home page.

3.34 Get Open Items DG

From Menu path: Customer > Customer Transactions > Donations (Kunde > Kundetransaksjoner > Givertjeneste)
Returns data on open Donation transactions.

3.35 Get Order Details

From Menu path: Billing > Orders > Overview Order (Fakturering > Ordre > Oversikt Ordre)
Returns data from the Order registry. The XML returns contains both order header as well as detailed row overview.

3.36 Get Payment Approvers

Not operational per 2019-02.

3.37 Get Payroll Rates Simple

From Menu path: Payroll/Expenses > Rate and Tables > Rate Setup (Lønn/Reise > Satser og tabeller > Satsoppsett)
Returns data from the Payroll Rate registry.

3.38 Get Payroll Summary

From Menu path: Payroll/Expenses > Inquiry > Payroll Statistics
Returns summarized information about employee payroll details.

3.39 Get Price Lists

From Menu path: Billing > Product > Price Setup > Pricelist (Fakturering > Produkt > Pris oppsett > Prisliste)
Returns data from the pricelist registry. XML return contains both locally created ones as well as pricelists inherited from higher up in the hierarchy.

3.40 Get Products

From Menu path: Billing > Product > Product (Fakturering > Produkt > Produkter)
Returns the available billable products in the product registry.

3.41 Get Project Summary

Related Menu path: Project > Project summary (Prosjekt > Prosjektforside)
This is a highly sophisticated method that allows for exporting detailed data related to ongoing and historical projects. There is a wide selection of necessary parameters as well as filtering options. The reader is advised to consult the documentation “Xledger Web Services – Reviosion YYYY-MM-DD” for an overview of these.

3.42 Get Projects

From Menu path: Project > Projects (Prosjekt > Prosjekter)
Returns the products from the product registry.

3.43 Get Sales Order Details

From Menu path: Billing > Billing > Invoice overview (Detail rows per invoice) (Fakturering > Fakturering > Oversikt salgsordre (Detaljer per salgsordre))
Returns data regarding invoices, with an emphasis on the invoice rows.

3.44 Get Sales Orders

From Menu path: Billing > Billing > Invoice overview (Fakturering > Fakturering > Oversikt salgsordre)
Returns data regarding invoices (open and historical) on the entity.

3.45 Get Sales Orders Simple

From Menu path: Billing > Billing > Invoice overview (Fakturering > Fakturering > Oversikt salgsordre)
Returns simplified data regarding invoices (open and historical) on the entity.

3.46 Get SO Details

From Menu path: Billing > Billing > Billing Input Details > SO Details (Fakturering > Fakturering > Fakturagrunnlag > Fakturagrunnlag)
Returns SO detail rows. Allows for extracting invoice transaction prior to invoice generation.

3.47 Get Simple Account Balance

Returns balance per account.

3.48 Get Supplier Transactions

From Menu path: Supplier > Transactions by supplier (Leverandør > Leverandørtransaksjoner)
Returns data on supplier transactions. By setting DataOption / eOption to value = 1, it will exclusively return open items. Historical transactions can be viewed by choosing value = 2 or value = 3.

3.49 Get Supplier Balances

From Menu path: Supplier > Supplier Transactions > Aging - Open Items
Returns an aggregated overview over open items per supplier.

3.50 Get Suppliers

From Menu path: Supplier > Supplier registry (Leverandør > Leverandørregister)
Returns data from the supplier registry on the entity. Please note that employees will also appear here, as they are created as suppliers in Xledger. These can easily be identified as they are returned with value <SupplierGroup>Ansatte</SupplierGroup>.

3.51 Get Task Summary

From Menu path: Task list (Oppgaveliste)
Returns data from the Task list in the left menu of the Xledger interface. In the method call, User ID (username in Xledger) and Menu group must be amongst the parameters. The value in Menu Group is that of access roles in Xledger. Examples of Role code values are the following here:

- 1302: Finansleder / Finance Manager
- 1303: Ansatt / Employee
- 1304: Regnskapsfører / Accountant

The user account (User ID) must have access to the chosen role on the entity if this method is to be used.

3.52 Get Tax Assessments

From Menu path: Financials > Period/Term Ending > Year End > Tax Assessment (Økonomi > Periode/terminslutt > Årsoppgjør > Grunnlag skatt)
Returns data from the menu path listed above. Fiscal Year must be defined as a parameter in the method call.

3.53 Get Timesheet Entries

From Menu path: Home > Timesheets > My Timesheet Entry per Day (Hjem > Timelister > Min timeføring daglig)
Returns data from the menu path listed above. Both From- and To-dates needs to be defined as parameters in the method call.

3.54 Get Timesheet Summary

Related menu path: Project > Timesheet Enquiry (Prosjekt > Timespørring)
Returns data regarding employees' timesheets over a given period of time. The method includes several filtering methods as well as parameter requirements – these are listed in the documentation "Xledger Web Services – Reviosion YYYY-MM-DD".

3.55 Get Users

From Menu path: Administration > System Access > Local Users (Administrasjon > Tilgangskontroll > Lokale brukere)
Returns data regarding the user accounts created locally on the entity. DataOption / eOption 2 and 3 can be used to extract an historical overview of users that are currently inactive.

3.56 Get Work Orders

From Menu path: Project > Work Order > Work Order (Prosjekt > Arbeidsordre > Arbeidsordre)

Returns data regarding work orders created on the entity. Please note that as of November 2015, the Work Order functionality is work in progress. The XML-return will be identical to that of the import format for Work Orders, LG07.

3.57 Get Workflow Journal Headers

From Menu path: Accounting > Journal Entry > Journal Entry List
Returns information about vouchers/journals currently in workflow. Will return information on both Journal Header as well as associated details.

3.58 Get Workflow Journal Headers Simple

From Menu path: Accounting > Journal Entry > Journal Entry List
Returns information about vouchers/journals currently in workflow. Will only information on a header level.

3.59 Get XCube Data

From Menu path: Financials > General Ledger > XCUBE Financials (XCUBE Økonomi)
Returns XCUBE data based on existing XRW Report templates. The XRW report code is required as a parameter Template. Should primarily be used in cooperation with advanced Xledger users.

4. Import formats - Accounting & Finance

4.1 AM01 – Assets

This format is used for importing assets.

4.2 AM02 – Import of asset depreciation

This format is used for importing asset depreciations.

4.3 AR10 – Invoice journal with Subledger (Mamut-Gbat10)

This format is used for importing invoice journals. It is identical to the GBAT10 format used by Mamut. AR10 may create new subledgers; as a *minimum*, they will need to contain Code (Column J – CustomerCode) and Description (Column L – CustomerName). Subledgers may only be created when placed on rows that contain an account that has Ledger Type Accounts Receivable or Accounts Payable (1500, 2400 etc). The column VoucherNo will define which rows that will be merged into the same voucher.

4.4 GL02 – Accounting journal with Subledger

This format is used for importing General ledger transactions. GL02 is amongst the most used importformats in Xledger. It has the possibility to create subledgers – the same requirements listed in *AR10* applies also here. GL02 also supports updating subledger information (namely address, email etc.); this is done by setting value 1 in column Z (UpdateSubledger). Can be imported with headers by choosing import definition GL02H.

4.5 GL02b – Accounting journal with Subledger expanded

This format features the same functionality as GL02, as well as some added features:

- Option to assign «Entity ID» per row. This facilitates that one import file may import vouchers for several (sub-)entities.
- Option to use periodization for vouchers.
- Option to define whether a voucher should enter Work flow or not
- Option to define reporting currency
- Improved support for importing supplier invoices to the "Unpaid Bills" Menu path; GL02b supports import of Pay Code, Pay Doc Code, Pay Doc Text
- Option to define «Our ref.» as an accounting dimension to workflow

4.6 GL02XML – Accounting Journal With Subledger (XL Standard)

This format is an XML-based variant of GL02b. **It supports embedded images in base64-encoding.** Note that XML formats does not provide the same level of detail in terms of error reporting upon processing.

4.7 GL02H – Accounting journal with Subledger /w header

Identical to GL02 in column setup. The only difference is that is allows for importing with a header row.

4.8 GL11 – Budget

This format is used for importing budget rows. There has to be a reference to an existing budget (These can be found in **Financials > Budget > Budget setup**).

4.9 GL11b – Budget GL 1-5

An extended version of GL11 that also supports Posting3, Posting4, and Posting5.

4.10 GL20 – XGL Values

This format is used for importing XGL values.

4.11 GL21 – Object Values

This format is used for importing object values. As such, it can be used to define anything from Cost Centers to Product Groups. See **Administration > Objects > Values** for an overview of what objects that are supported by GL21.

4.12 GL22 – Chart of Accounts

This format is used for importing Chart of Accounts.

4.13 GL23 – Object Link Values

This format is used for importing object link values. As such, it can be used to define anything from employee manager links to project access. See **Administration > Objects > Link Values** for an overview of what object links that are supported by GL23.

4.14 GL27 – XGL Import (XL UPD)

This format is used for importing and updating XGL values. Use value 1 or “X” in End of Line to enable “Allow posting”. Value “0” unchecks “Allow posting”.

4.15 OVI – Object Values Convert

This format is used for importing conversion rules to the menu **Import > Import > Conversion > Object Mapping**.

5. Import formats – Bank

5.1 BR01 – Bank statement transactions

This format is used for importing bank statement transactions.

6. Import formats - Billing

6.1 LG01 – Products (expired)

This format was used for importing products to the product registry. **We recommend that LG03 is used for importing products.**

6.2 LG02 – Pricelist

This format is used for importing rows to the Menu path Billing > Product > Price setup > Pricelist. Note that it needs to have a reference to an existing pricelist.

6.3 LG03(TMP) – Products

This format is used for importing products to the product registry. It also supports updating existing products. Note that Purchasing-related fields need a predefined setup in the logistics/purchasing module.

6.4 LG04 – Product prices

This format is a simplified version of LG03. It only imports the product itself (Code + Description) as well as Cost- and Sales price. It supports update of existing entries.

6.5 LG05 – Product Trade items sample file

TBA.

6.6 LG06TMP – Order Import (XL UPD)

This is an XML-based import format. It supports creating new orders as well as updating existing orders, both on header and detail levels. Note that XML formats does not provide the same level of detail in terms of error reporting upon processing.

6.7 LG07TMP – Work Order Import (XL UPD)

This is an XML-based import format. It supports importing new work orders as well as updating existing work orders. Note that XML formats does not provide the same level of detail in terms of error reporting upon processing.

6.8 LG08TMP – Product Item – Goods Receipts

This import imports data to the menu **Purchasing > Goods Receipt > Goods Receipt**.

6.9 LG10TMP – Stocktaking Details

This import creates details (new rows) in an open Stocktaking. Before starting the import make sure you have an open Stocktaking. The Stocktaking number need to be filled in in the first column. Then run the Stocktaking processing to complete when the import has been executed.

6.10 SO01 – Invoice base transactions with Subledger

This format is used for import Invoice base transactions. Rows imported with SO01 will initially be found in the Menu path Billing > Billing > Billing Input Details > SO Details. From here, they will transferred to Billing > Billing > Invoice Overview whenever the job Invoice Processing is executed (manually or by scheduled run). SO01 supports updating subledger address as well as E-mail address. Note that shipping method and invoice layout may not be defined through SO01 – this will be defined through setup either on customer or entity.

6.11 SO01b – Invoice base transactions with Subledger(XL Extended)

This format is an extended version of SO01. s an extension of the SO01 format. Extensions include (among other things):

- Importing invoice details on a group or domain level for underlying entities
- Importing periodization invoices
- Defining Invoice Layout and/or Invoice Delivery Method from import file
- Defining Invoice Header and Footer either through free text fields or references to predefined Invoice Texts

6.12 SO01b_2 – Invoice base transactions with Subledger(XL Extended)

This format has an identical column setup as SO01b. The difference is that it supports different values in the UpdateFlag column that dictates different update settings. The options are as follows:

Bit	Value	Updating
1	1	Address, Ext.ref, Phone, Email
2	2	Address
3	4	Ext.ref, Phone, Email
4	8	Subledger Name (NOTE: When code is blank then it will demand that the Entity Setup Field 'Import Unique Person as Subledger' is inactive in order to update an existing subledger name)
5	16	Company/Person Name (NOTE: When code is blank then it will demand that the Entity Setup Field 'Import Unique Person as Subledger' is inactive in order to update an existing subledger name)

For example: If you want to update both subledger name, Ext. Ref, phone and email but not the address you would use the bit 3 and 4. This will then mean VALUE = 4+8 = 12

To have all fields and names updated you would use 2+4+8+16 = 30

6.13 SO01P - Invoice base transactions with Subledger and Pricelist

This format has a similar structure to SO01. The only difference is that it will use the prices defined in Xledger instead of what is defined per row in the file (which is the case in SO01).

6.14 SO02 - Subscribers for Subscription

This format imports subscribers for existing subscriptions.

6.15 SO03 – Subscription Setup Import

This format import Subscription data on a header level. It will primarily import new subscription setups to **Billing > Billing > Recurring Billing > Recurring Billing**. The exception is when value Order Type is set to '3' (Donation). In this scenario it will import to **XRM > Donation/Funding > Donation Setup > Recurring Donations.** Note that as of February 2019, this import definition does not feature UPDATE functionality.

6.16 SO04 – Subscription Details

SO04 is meant to be used in combination with SO03. The latter creates new subscription setups, while SO04 adds detail rows for an existing subscription. Use Subscription No for identification.

7. Import formats - Payroll

7.1 HR01 – Employee Register

This format is used for importing employees to the employee registry. Note that changes in the Payroll module from 2015-R3 has changed the procedure of creating new employees (Employees are now also Contacts). If HR01 is to be used, there will be a need to add Contact manually post-import. Note that it also needs employee supplier subledgers to be created in advance. **Note: We strongly recommend using either HR09 or HR01-2 for importing new employees as it is aligned with the contact and supplier registries.**

7.2 HR01-2 – Contacts and Employees

This format is used for importing Employees. It will simultaneously create entries in the Contact and Supplier registry.

7.3 HR06 – Employee Positions

This format is used for import Employee Positions. An employee may have several such.

7.4 HR08 – Absence Import

This format is used for importing employee absence. Employee data as well as absence codes etc. must exist prior to import.

7.5 HR09 – Employee registers with update

This format supports both the creation and update of employees and their corresponding tables (Contact, Supplier).

7.6 PR01 – Payroll rates

This format is used for importing rates to payroll rate elements. If one is to import to an individual employee, select Employee / Ansatt in column B (Object) and reference to an employee in column C (Object Value). One may import on a position level in a similar fashion. **We recommend using PR01-2 for importing payroll rates as it has more fields available.**

7.7 PR01-2 – Payroll rates with employee and position

This format is reminiscent of PR01. It differs in that it has predefined columns for employee and position. Additional parameters may thus be defined in the columns Object / ObjectValue.

7.8 PR01-3 – Payroll rates update with employee and position

This format is identical with PR01-2 in terms of column setup. The difference is that this format also supports UPDATE. When a rate element is updated with new values, such as a new rate, the old row containing rate element automatically gets a “Date To” value.

7.9 PR02 – Payroll entry

This format is used for importing rows to the Menu path Payroll/Expenses > Payroll Setup Overview.

7.10 PR03 – Tax Setup

This format is used for importing rows to the Menu path Payroll/Employees > Employees > Employee Tax Setup. This will in general not be necessary (in Norway) as Xledger may directly access tax information from Altinn.

7.11 PR05 – Payroll entry with position

This format is reminiscent of PR02. It differs in that it also allows for defining employee position.

8. Import formats - Project

8.1 PM01 – Projects

This format is used for importing projects and potentially project hierarchies (Column C – MainProject and Column D – ProjectGroup). The latter requires that the (main) projects are created

in advance. Note that PM01 does not support updating existing entries, nor does it check in advance whether a project with a given Code/Description already exists in the registry.

8.2 PM10 – Time transactions

This format is used for importing hour rows for employees. All employees, projects, tasks, and project tasks must be created in advance before the format can be used in an appropriate manner.

9. Import formats - Subledger

9.1 AR02 – Customer update

This format is used both for **creation** and **update** of customers in the customer registry. The reference should be CustomerCode (Column B). Note that certain columns requires the internal system code as a syntax (Invoice delivery method, Invoice Layout, Order Type). **Also note that if fields are blank in the import file, the same fields will be blanked in the registry in an update. Always make sure that the file contains all the information that the customers should have in the registry.**

Tip: AR02 can be used in combination with Accounts Receivable > Server jobs > **Export Customer.** In the field Export set variant, select AR02. You will then get an export from the system which can be modified and imported anew with desired updates.

9.2 AP02 – Supplier update

Similarly to AR02, AP02 will both **create** and **update** new and existing suppliers in the registry. If fields are blank in the import file, the same fields will be blanked in the registry in an update. Always make sure that the file contains all the information that the suppliers should have in the registry.

9.3 RM02 – XRM Contact with subledger import

This format is used for importing XRM contacts. It features functionality that allows it to create a new subledger entry based on the import simultaneous with the creation of the contact.

9.4 SL01 – Opening balance Subledger

This format is used for importing opening balance on subledgers. Transactions will be imported with voucher type OS. Should these be imported with erroneous data, they need to be re-imported with inverted amount values in order to match. **We thus recommend a high degree of thoroughness when working with SL01.**

9.5 SL02 – Subledger (Basic)

This format is used for importing customers and suppliers (LedgerType AR/AP). It has a limited amount of fields available. It is recommended for cases where the subledger detail requirement is low.

9.6 SL03 – Subledger (expanded)

This format is reminiscent of SL02, but it features additional fields. It should cover the needs of most cases.

9.7 SL04 – Subledger (full)

This format is reminiscent of SL02 and SL03, but with support for all available subledger fields. Will primarily only be necessary for cases where there is a very high subledger detail requirement. **Note that due to the high amount of columns, SL04 does not support verification.**

10. Using Object (values)

Information not available in other methods can in many instances be returned as Object Values.
An overview of all the existing objects can be returned when executing an unfiltered GetObjects call.
Objects are returned with the following syntax:

```
<Object ID="e7ba11ff-2826-4e89-8192-ba4e94f05e2a">
  <Code />
  <Description>Contact</Description>
  <Text>Contact</Text>
  <SystemObjectCode>12</SystemObjectCode>
  <SystemObject>Contact</SystemObject>
  <Created>2002-01-29T16:00:38.787+01:00</Created>
  <Modified>2002-01-29T17:12:46+01:00</Modified>
</Object>
```

The above return can help identifying the following:

a. The Object ID to be as a parameter used in a GetObjectValues method call. For instance, using the value e7ba11ff-2826-4e89-8192-ba4e94f05e2a as a parameter in GetObjectValues will return a (somewhat basic) overview of Contacts on the Entity.
b. Objects that support having values imported through GL21. Objects returned in GetObjects will be eligible for use in column A (Object) in GL21.