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Financial Consolidations

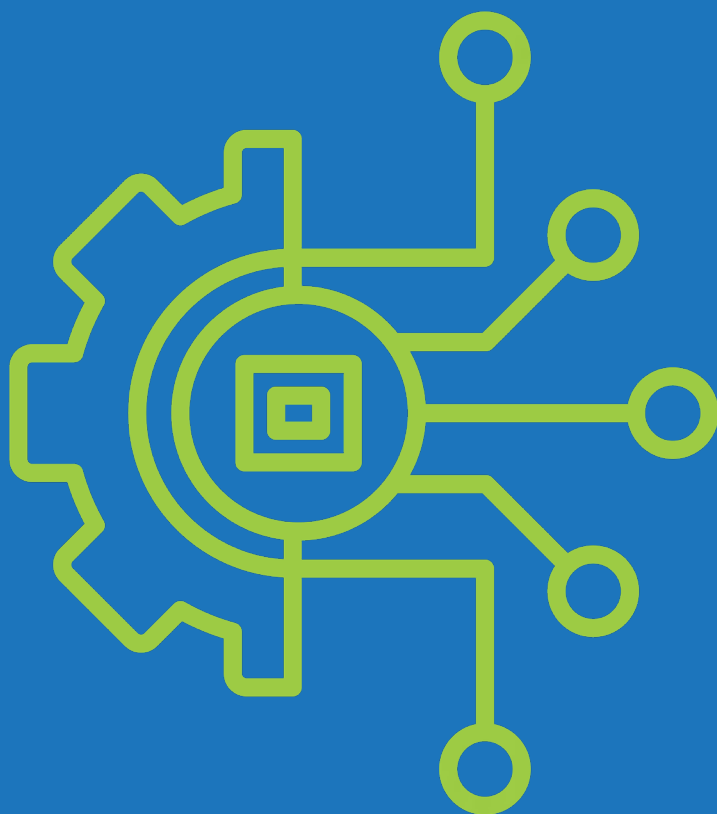## with the Solver Suite

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Introduction

The purpose of this white paper is to provide an overview of Solver. With frequent, automated cloud updates, the solution is continuously being enhanced to drive faster, better decisions across its global customer base. The Solver Suite has robust financial consolidations, eliminations and multi-currency capabilities and the purpose of the white paper is to describe this specific functionality. For other functionality, please review Solver's website.

Product Summary

Solver provides a single, cloud-based solution that automates financial reporting and planning processes, and supports faster and better decisions based on key information from across the organization's data sources.

Key benefits that Solver provides include:

- A top-rated extended financial planning and analysis solution (xFP&A) by G2 based on user satisfaction
- Global partner channel with industry expertise to help you whenever and wherever
- Cloud software, support, and upgrades, packaged into a subscription price, providing unmatched ROI over traditional CPM solutions
- Built for business users to manage the entire solution without the need for developers
- Executive and management data from across the organization that is easily accessible in
- ONE place with Solver's intelligent Data Warehouse
- Solver's multi-tenant cloud application provides quick initiation, SOC 2 compliance, automatic software upgrades, and scalability at one's convenience
- Solver provides the power and the familiarity of cloud-connected Excel to solve the most complex formula and layout requirements for reporting and planning template designers
- Easy-to-use, pre-built integration to Power BI, the world's #1 visualization solution
- Fast and cost-effective integrations provided with Solver's wizard-driven CSV, SQL, and prebuilt ERP/ CRM Connectors
- Unlimited access to reports and dashboards from secure web portal
- Hybrid cloud option provides customers with real-time cloud reporting capabilities for their on-premise ERP system

Company Summary

Solver, Inc. is redefining the category of cloud-based reporting and planning. The Solver solution is built to enable faster and better business decisions across the entire organization. Solver combines financial and other key data into a single tool,powered by the most flexible report and planning form designer on the market. Organizations use this solution to automate and streamline financial and operational reports, consolidations, and budgeting and forecasting processes. Solver empowers users with complete insight that drives intelligent decisions and competitive advantages. Headquartered in the United States, Solver, Inc. has more than a dozen offices and hundreds of partners globally that provide local and industry expertise. To learn more, visit www.solverglobal.com.

Consolidation Topics

Depending on organizational complexity and business requirements, companies look to consolidation software to provide one more of the following features (all of these areas are covered in the rest of this white paper):

- Mapping different Chart of Accounts
- Consolidation process (Workflow)
- Data loading
- Reconciliation
- Currency conversions
- IFRS to GAAP adjustments
- Other Consolidation adjustments
- Eliminations of intercompany transactions
- Minority calculations
- Allocations
- Consolidate financial statements
- Consolidate sub-ledger or statistical data
- Sarbanes Oxley (SOX) compliance

Solver Financial Consolidations Overview

Companies look for modern, automated consolidations solutions for many reasons, such as:

- Move to a cloud-based platform.
- Improve consolidation process and utilize workflow with automated alerts and controls.
- Eliminate manual spreadsheet consolidations.
- Get away from older, legacy reporting & consolidation tools (such as Hyperion, TM1 and other IBM Cognos applications, FRx, etc.) that either are too complex and expensive to maintain, or they don't perform all the tasks expected from modern tools in this area.

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- Implement a Sarbanes-Oxley compliant solution.
- Implement a solution that can handle multi-national requirements such as GAAP to IFRS adjustments and currency conversions.
- Implement a modern, user-friendly solution that can be fully managed by the finance team.
- Implement a solution that is more scalable and versatile than traditional consolidation solutions, so that is also can be used for all kinds of other reporting such as operational reporting, statistical reporting, etc.
- Implement a reporting and consolidation solution that is an integral part of a Corporate Performance Management (CPM) suite that also include budgeting, forecasting, modeling, ad-hoc reporting, dashboards (including integration to 3rd party dashboards like Power BI, Tableau, Qlik, etc.) and data warehousing.

Launched in the Fall of 2009 and re-built with a modern, multi-tenant cloud architecture in 2017, Solver has become one of the most complete and modern Corporate Performance Management (CPM) suites on the market. It allows the finance team to regain control of all aspects of the reporting and consolidation process. Below is a sample architecture slide that shows all the main components of the Solver suite.

On the following pages you can read about Solver and how it deals with the various areas that often are part of a company's consolidations needs.

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Consolidations Architecture

Solver consolidates by populating the Solver Data Warehouse (DW) with data from the ERP system(s). The latter is the way almost all consolidations software work. Below is a more detailed description of this architecture.

Using the Solver Data Warehouse (DW), you get a best-of-breed consolidation architecture. You can upload data from an unlimited number of ERPs and/or companies and use the Solver Reporting module to report across and consolidate the companies that were uploaded in the data warehouse.

You can consolidate both General Ledger data as well as operational data such as Payables, Receivables and Sales.

The concept of moving data out of the ERP system(s) and into an external database where the consolidated reporting will take place is also used by most other wellknown consolidations and reporting tools such as Hyperion (Oracle), TM1 (Cognos), Host Analytics, Prophix, BPC (SAP), and so on.
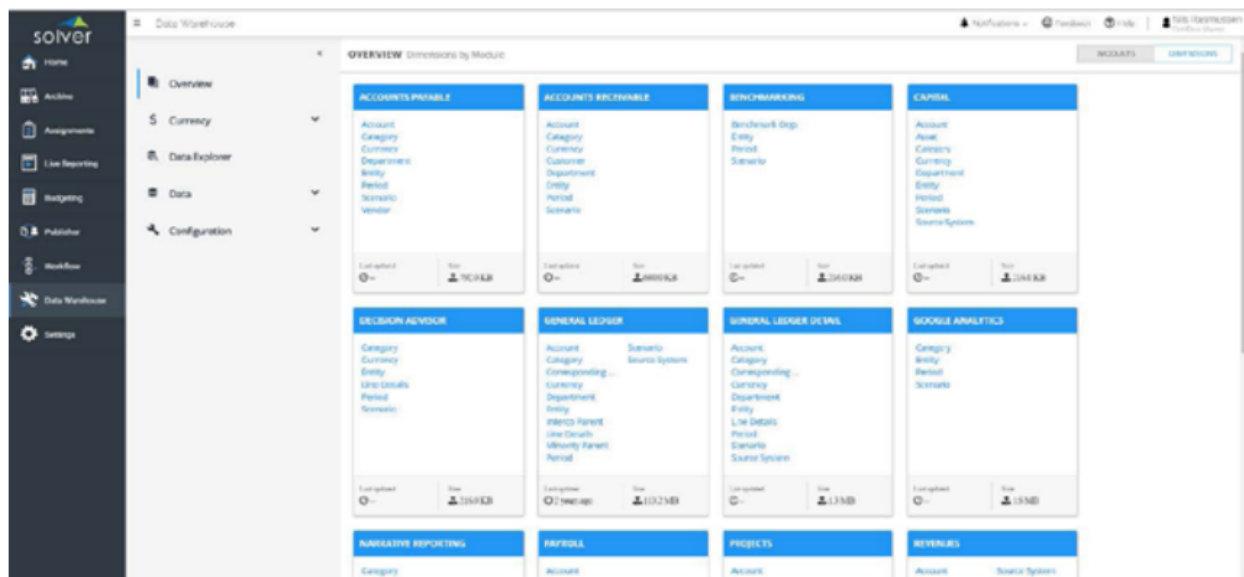
Using Solver's Gateway to conenct to on-premise ERPs or it's cloud ERP connectors, data is loaded from the ERP system(s) and into the DW on a daily (or more frequently) basis, either on a schedule or by a person triggering the upload (e.g. after last minute adjustments in the GLs).
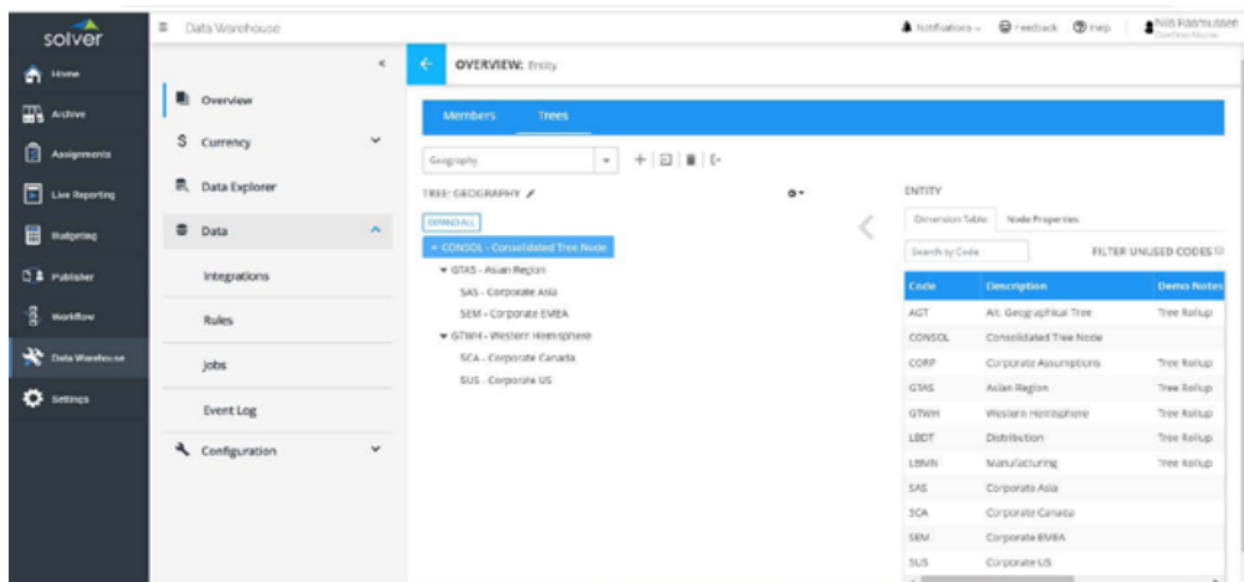
Using company attributes (e.g. specifying a roll-up to divisions and HQ) or trees (see screenshot above), an administrator can set up desired roll-up structures within the Solver DW interface.

Consolidating with Solver becomes increasingly beneficial under one or more of the following conditions:

- Moderate to advanced currency requirements (beyond what is done in the ERP system).
- Medium to large number of companies to consolidate.
- Concerns around slower ERP system performance when heavy reports are being executed.
- Need to enter elimination entries or other consolidation adjustments beyond what can easily be performed within the ERP system itself.
- Interest in also consolidating certain operational data (payables, sales, etc.).
- Interest in creating a platform (the Solver DW) for future/additional reports,budgets and dashboards that also bring in data from other data sourcesthan the ERP system.
- Different chart of accounts structure across companies.

Consolidations with Multiple, Different ERP Systems

Some multi-entity companies have different accounting systems in their subsidiaries and this tend to add complexity to a consolidations process compared to a situation where all subsidiaries reside within the same ERP system and use the same chart of accounts.

There are a couple of ways to enable consolidated reporting when there are multiple ERP systems:

1. Upload data from a subsidiary ERP system into a corporate ERP system

This methodology is typical when there is a dominant ERP system within the organization and frequently when there is a long term strategy to put all subsidiaries on the same ERP system. In this case, there is not much work for Solver, as ultimately all the subsidiaries will reside within a single ERP system and thus the consolidation architecture described earlier in this white paper will be utilized.

2. Upload data from each subsidiary ERP system into the Solver Data Warehouse (DW).

This methodology leaves each ERP system as is and account mapping and loading is taken care of as part of the transfer of data and dimensions into the Solver DW. This is typical when subsidiaries are autonomous; there are frequent acquisitions or other good reasons not to import data from one ERP to another prior to consolidated reporting taking place.

Consolidations with Multiple, Different Chart of Accounts

In situations where there are different Chart of Accounts across various subsidiaries, using the Solver Data Warehouse (DW) is typically the best way to go. The process could look like this:

1. Extract data and GL dimensions (account, division, etc.) from each ERP.

2. Transform/map the local ERP chart of accounts into a corporate/consolidated chart of accounts.

3. Load the converted data (now mapped to the corporate chart of accounts) into the Solver DW.

4. Run consolidation reports.

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Alternatively, step #2 above ("Transform/Map...") can be performed within the Solver DW using attributes in the DW account table to map individual account numbers to a corporate chart of accounts. See screenshot below. Another methodology is to do the account mapping within an account tree in the DW and use the mapped summary nodes when writing reports.

Consolidation Process and Workflow

Depending on how complex your consolidation process is, there are several options for how to organize it

1. Manage it yourself without any Solver workflow functionality. This should be fine if you have a fairly simple consolidation process

2. Use the Solver's workflow module. You then have an automated workflow status screen showing where each person is in the monthly consolidations process. You also have e-mail alerts and full discussion functionality.

Data Loading and Reconciliation

Whenever the Solver Data Warehouse (DW) is used in the consolidations process, data need to be loaded from the ERP system(s) and into the DW first. There are several ways to load data using Solver's native integration tool:
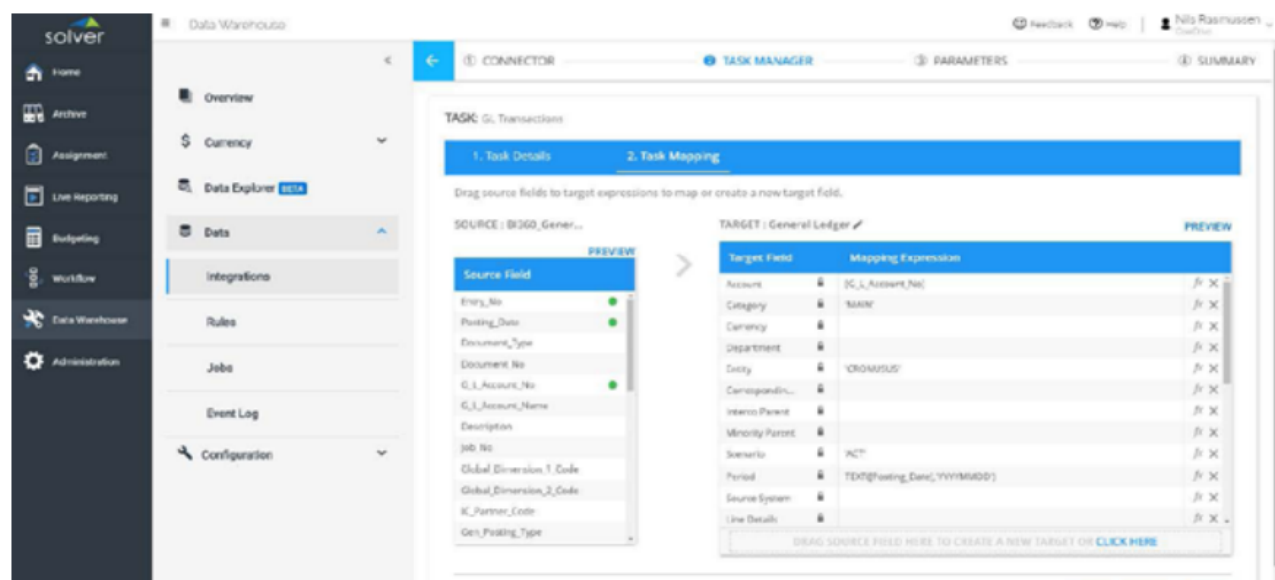
1. Load with Solver's pre-built ERP connectors (such as for all Microsoft Dynamics ERP systems, SAP, Sage, Acumatica, Netsuite and Quickbooks Online).

2. Load from files (CSV format).

3. Load from on-premise data sources using Solver's Gateway and SQL Connector.

4. A more unconventional, but fully configurable method to load data into the DW is to use the Solver Planning module and design an input form. You can then either copy and paste or enter data there and save it directly to the DW.

Once data has been loaded to the DW, many organizations have subidiary staff or headquarter staff reconcile the imported data to ensure everything is correct. There are several ways to perform this reconciliation, including:

1. Use the Data Explorer in the Solver Data Warehouse
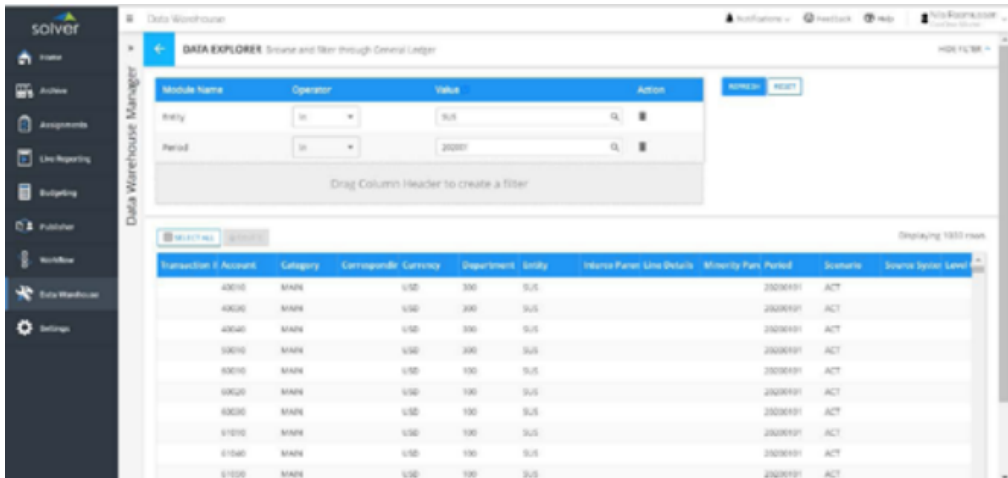
1. Use the Data Explorer in the Solver Data Warehouse

The advantage with this approach is that you can create any layout you want, including with line item comment input (requires Solver Planning). You can also auto-distribute it to designated users with the Publisher.

Currency Conversion

As mentioned other places in this document, Solver can perform the currency conversion within the Solver Data Warehouse (DW). There is also a third scenario, which is that the ERP system itself performs the currency conversion and the Solver report writer simply pulls the converted data into reports. Let's briefly cover these methods below:

1. ERP system converts, Solver reports

This methodology is typical when the ERP system has solid currency conversion capabilities and can store data in both local and parent/reporting currencies. In this case, Solver simply loads and reports directly on the converted data and no currency conversion functions need to be performed in Solver prior to producing reports.

2. Solver Data Warehouse converts, Solver reports

This methodology is recommended when more advanced currency conversion is required and there are quite a few currencies to convert. The Solver Data Warehouse (DW) has both rate tables, rate types and a currency conversion engine, and it can perform advanced currency conversion on a scheduled basis, e.g. right after scheduled data loads have taken place from the ERP databases (s). Once currency conversion has taken place, the Solver report writer simply reports on the local currency and/or converted data.

You can read more about currency conversion in Appendix 2.
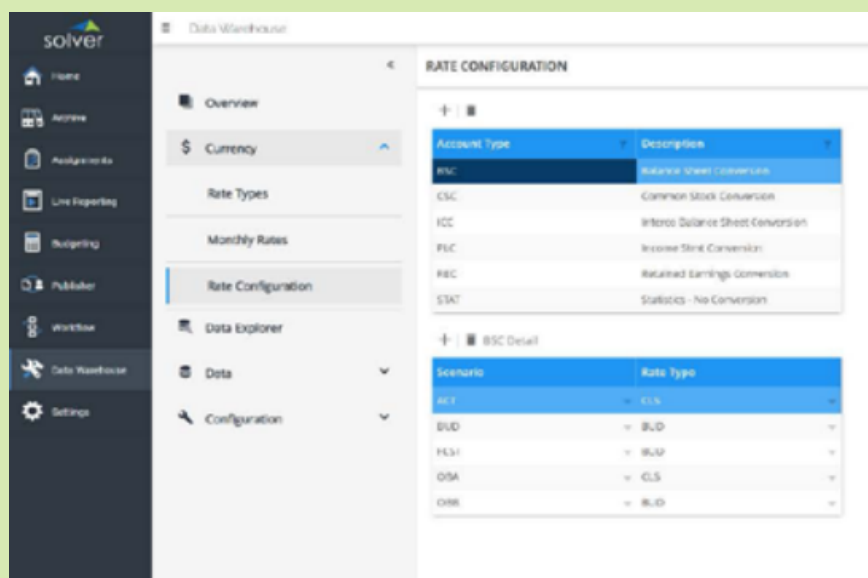
Consolidation Adjustments

As mentioned other places in this document, Solver can perform the currency conversion within the Solver Data Warehouse (DW). There is also a third scenario, which is that the ERP system itself performs the currency conversion and the Solver report writer simply pulls the converted data into reports. Let's briefly cover these methods below:

IFRS to GAAP Adjustments

Multinational companies are increasingly in need of a safe, easy way to create IFRS to GAAP (or the other way around) adjustments in order to comply with domestic and international accounting rules. Sometimes this role is performed by the corporate ERP system and Solver simply reports on the adjusted data, while other times companies want the consolidation and reporting tool to handle the IFRS/GAAP adjustments. In the latter case, the Solver Data Warehouse (DW) is an excellent option. Using simple web-based input forms built with the Solver Planning module, users can enter Inventory adjustments and other required entries, and store them directly to the DW.

The DW will store entries with user ID and date stamps for audit purposes. Once this is done, it is s simple task for the Solver report writer to access the imported GL data as well as the entered adjustments to produce consolidated reports as well as any required audit trail reports.

You can read more about IFRS to GAAP Adjustments in Appendix 1

Other Adjustments

Depending on the company and its requirements, there can be several other situations where a corporate controller needs to post consolidation-related adjustment entries. Including currency-related adjustments, temporary correction of erroneous data from a subsidiary, etc. This can be done rather elegantly by using Solver Planning to design a user-friendly input form(s) where such transactions can be entered and stored in the Solver Data Warehouse. By default, entered transactions will be tracked with user id and time/data stamps. You can also enter comments to explain the reason for the adjustment entries.

Eliminations

There are several ways to perform eliminations of intercompany transactions:

1. ERP system offers elimination functionality

Many ERP systems either provide the facilities to enter elimination entries into elimination companies or they provide functionality to perform auto-eliminations. In either case, the Solver report writer can report on this data and does not need any special intercompany elimination functions beyond that.

### 2. Eliminations done by the Solver Reports/Forms running on the Solver Data Warehouse

The Solver Planning module offers fully customizable input forms that can be used for manual elimination entries. Furthermore, Solver's reporting module in combination with the Planning module's write-back functionality can perform automatic elimination calculations and store these to the Solver DW for use in consolidation reports.

3. Eliminations done within the Solver Data Warehouse (DW)

The Solver DW also offers an elimination process that can be run automatically after data has been loaded from the ERP systems and into the DW. This functionality will automatically create and post elimination entries in the DW based on inter-company transactions and roll-up trees (hierarchies). These elimination transactions are then available for the Solver report writer to be used in consolidation reports, intercompanymatching reports, etc.

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Minority Interest Calculations

Solver manages the consolidation entries necessary for organizations that have direct and indirect interests in multiple organizations and complex cross-ownership situations through organization hierarchies and predefined business rules. In addition, the process of determining effective ownership, ultimate percent control, and proper consolidation method is done automatically based on hierachies and business rules in the Solver Data Warehouse.
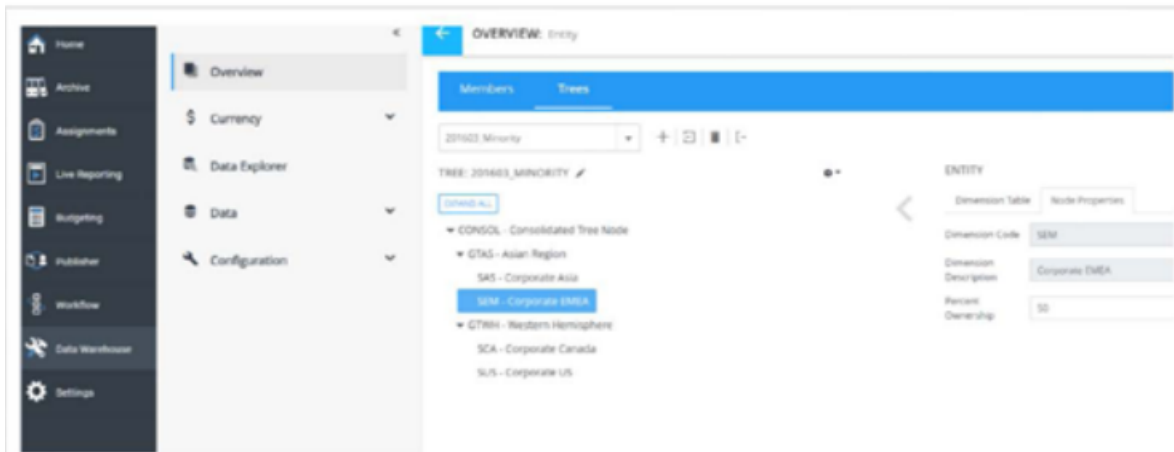

Allocations

Some corporations also need to perform allocations as part of their monthly consolidation process. For example, allocating corporate overhead expenses down to divisions and/or subsidiaries. Unless these allocations are already performed within the ERP system and are just part of the ordinary data loading to Solver, you can design simple or highly sophisticated allocation reports that calculates and saves allocations into the Solver Data Warehouse (DW). This requires Solver Planning for the write-back of the allocations. Because the resulting allocations become real transactions in the Solver DW, if desirable, you can later export these back to the ERP system as well. In essence, using Solver as your allocation engine

Consolidated Financial Reports

In a full consolidation scenario, at the point when data loading, account mapping, reconciliation, currency conversion, adjustments, and elimination processes have been completed you are ready to produce your consolidated reports with Solver's report writer. Reports can roll-up companies and display them in an almost unlimited number of report layouts, such as:

- Consolidated reports (companies are consolidated into single columns of e.g. actual, budget and variance figures):
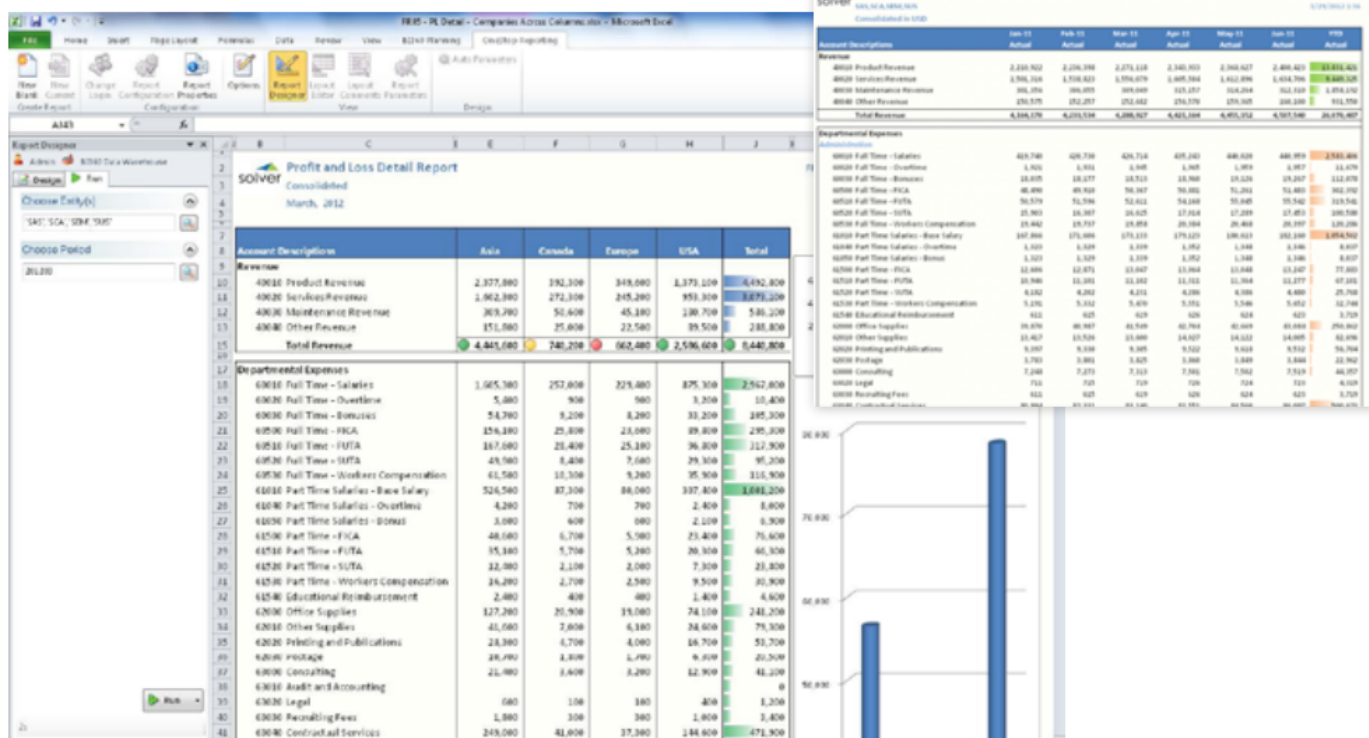
Consolidating reports (companies are listed side by side with a consolidated column on the right or left side of the report):

- Multi-sheet reports (different sheets shows report consolidated and for each entity).

Consolidated report on DW:

The report automatically repeats the report template for each division and subsidiary, with the end result being an automatically generated workbook with one sheet per business unit.
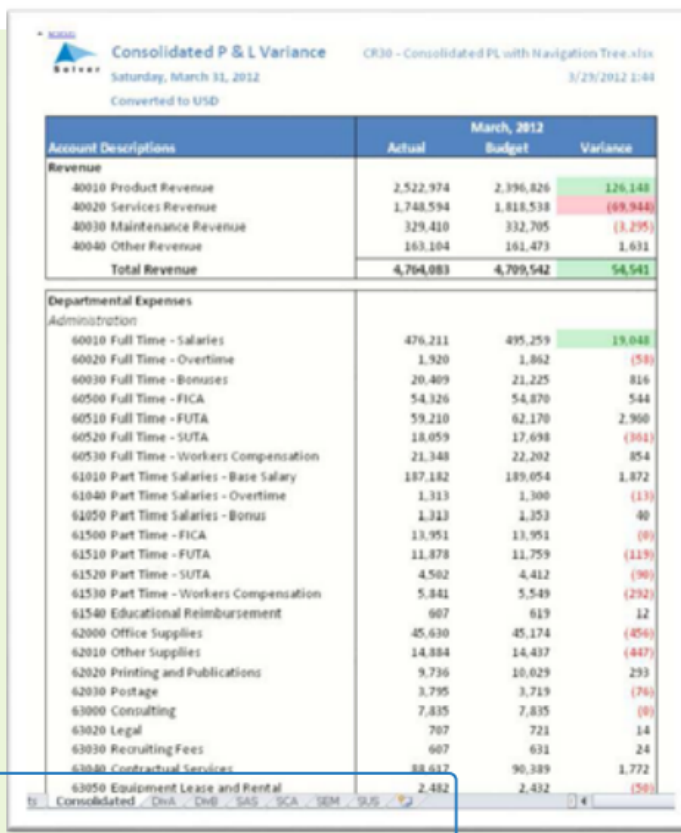
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Modeling Organizational Changes

When you need to see the impact of acquisitions, divestitures, or internal reorganizations, using the Solver Data Warehouse you can easily copy and change an unlimited number of corporate hierarchies ('trees") to help you model the to-be rollup. You can then use the Solver Reporting module to consolidate based on the beforeand after hierarchies to evaluate alternatives. With Solver it is easy to model organizational changes to answer questions like "What will the net tax impact be of changes in my legal structure?" or "What will trends be on my profitability with and without acquired or discontinued operations?".

Transform Your Financial Reporting Today

Don't let fragmented data and outdated processes hold your organization back. In today's fast-paced business environment, you need swift, accurate insights to make confident decisions across all departments.

It's time to transform your financial planning and analysis. Solver's cloud-based xFP&A solution is your key. The all-inclusive Solver Suite combines data from multiple financial and business applications to streamline planning, reporting, consolidation, and analysis, empowering data-driven decisions. Don't wait for better decision-making – make it happen now.

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