FINANCIAL MANAGEMENT SOFTWARE AND PLANNING SECURITY

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Abstract: *Financial Management Software is a financial consolidation and reporting application built with advanced Web technology and designed to be used and maintained by the finance team. It provides financial managers the ability to rapidly consolidate and report financial results, meet global regulatory requirements, reduce the cost of compliance and deliver confidence in the numbers. Your organization can improve its consolidation process and reporting as well as reduce inconsistent data and regulatory compliance risk. Accounting means to assign the correct numbers to the correct accounts in the correct time period. Consolidation means to combine the accounts of several entities according to accounting rules.In this case an extremely important is to ensure security. Application security is the security within an application. Security prevents two types of errors: intentional and accidental.*

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JEL Classification: *L86, L96, M15.*

1. Introduction

Financial Management Software, is a comprehensive, web-based application that delivers global financial consolidation, reporting, and analysis in a single, highly scalable software solution. Financial Management enables highly efficient collection and consolidation of data from diverse sources. It includes the following features:

- Process management for tight control of the review and approval process
- Data validation
- Currency translation to support multiple local currencies
- Automatic eliminations for intercompany transactions.

Financial Management is designed for large-scale, centralized web deployment. We can use it to consolidate data from diverse general ledger systems and locations around the globe. Advantages of financial Management are: reduces consolidation and reporting cycles by days or weeks; enables in-depth analysis of key performance and operational metrics; delivers accurate and timely reports to both internal management and external regulatory bodies; uncovers sources of profitability and cash flow at the company, product, brand, and customer levels; consolidates data with multiple consolidation paths. It enables user provisioning and sharing of metadata among Financial Management applications or between Financial Management and other products Financial Management can be integrated with the following products: Enterprise Performance Management System (EPM System); Enterprise resource planning (ERP) systems; Business Intelligence Suite, Enterprise Edition, and Financial Management Analytics for interactive dashboards and real-time reports; Data management applications. Financial Management uses a multitier architecture that includes a client tier, a middle tier, and a database tier.

Figure no. 1 illustrates **the three tiers** as well as external services that integrate with Financial Management.

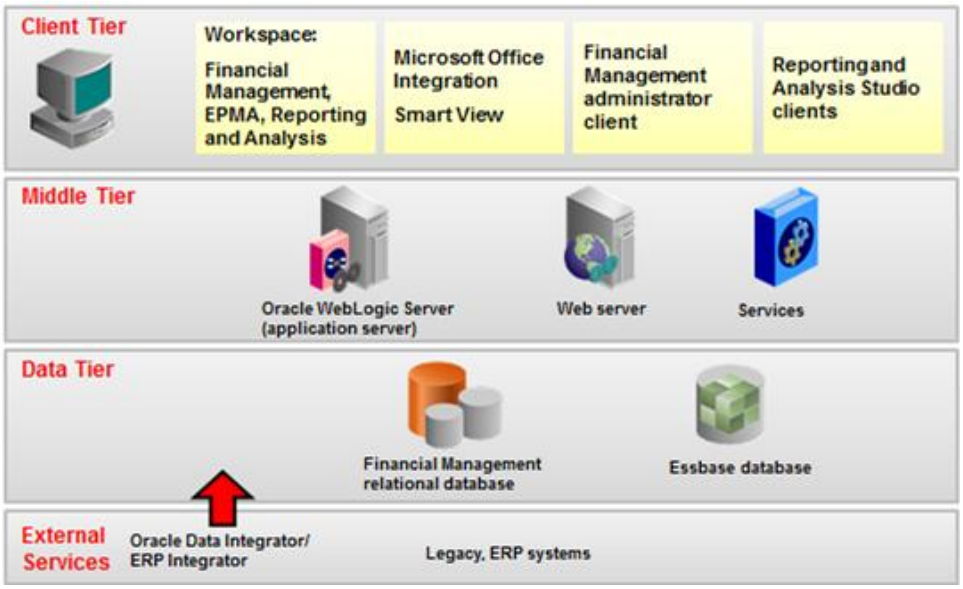

Figure no. 1. Financial management architecture

On the ***client tier***, Financial Management administrators and users enter data, perform approvals tasks, manage users and security, launch business rules, copy versions, develop data forms, work with Financial Reporting, and perform other administrative tasks. We can also manage Financial Management applications and metadata in the Financial Management administrator client. In the ***middle tier***, the web server can be on a separate machine or on the same machine as the Financial Management application server. The web server enables you to access Financial Management applications from a web client through a browser. The web server uses HTTP as the communications protocol. The ***data tier*** consists of the relational and optional Essbase databases. The following components require a relational database: Shared Services, Financial Management, Performance Management Architect, Calculation Manager and Reporting and Analysis. The ***External Services*** are to load metadata and data into Financial Management applications.

The ***Financial Management business process*** includes the following steps:

- *Load or enter data* - We enter data directly into Financial Management through data forms or Smart View grids, or you can load data through text files, FDM, or ERP Integrator.
- *Calculate data* - We calculate data from data grids and data forms on the desktop or on the web. We can also calculate data from the Process Control module on the web. Finally, we can use or create rules to calculate data.
- *When we calculate data*, calculation rules run for the selected scenario, year, period, entity, and value. In addition, all prior time periods within the same year that were not previously calculated are calculated. For example, if we calculate data for June, data that was not previously calculated for January through May is calculated.
- *Adjust data* - Journals enable you to make adjustments to accounts after the data is loaded or entered. They provide an audit trail of changes that were made in the application, and indicate the affected accounts, entities, and periods.

- *Translate and consolidate data* - Translation converts values from one currency to another. We can translate data from the entity's input currency to any other currency that was defined in the application. Currencies are not associated with a parent-child entity pair, so you can translate data on demand, separately from the consolidation process. Consolidation is the process of gathering data from dependent entities and aggregating the data to parent entities. After entering or loading data into base-level entities, you run a consolidation for a selected scenario and period to aggregate the data through the organization. As data is consolidated, the system performs the necessary currency translation and intercompany eliminations, as well as equity adjustments or minority ownership calculations if needed.
- *Review and approve data* - We review and approve data by using process management. Process management is the management of the review and approval process of financial data. We can use process management to submit budget plans, have them approved efficiently, and transfer ownership of data. In a centralized environment, we can also use process management to provide review control and to ensure data privacy. A process unit is the combination of data for a specific Scenario, Year, Period, Entity, and Value dimension. During the review cycle, we use process management to review, submit, promote, approve, reject, or publish process units.
- *Run and publish financial reports* - After entering, calculating, adjusting, and reviewing Financial Management data, we use Financial Reporting to depict the results in static or dynamic reports in HTML or in PDF.

With ***Financial Reporting***, we can graphically design and present analytic data. We can design traditional financial report formats, such as cash management reports, profit and loss statements, and balance sheets. We can also design nontraditional formats for financial or analytic data that include text and graphics. Figure 2 illustrates financial reporting functionality: Book and batch creation for similar reports; Scalable, cross-platform, server-based report generation; Flexible range of output options, like PDF and HTML; Annotation creations; Guided analysis; Reusable objects across multiple reports; Conditional formatting; Access by defined security; Grids and charts; Graphical report creation with access to multiple data sources; Dynamic scheduling that enables automated reporting.

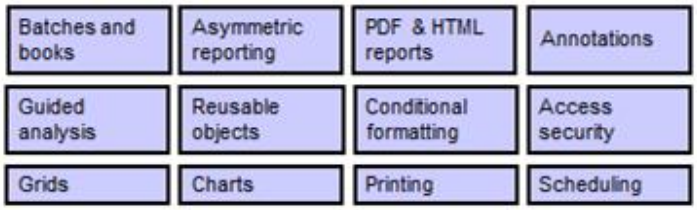

Figure no. 2. Financial reporting functionality

2. Aplication security

Accounting means to assign the correct numbers to the correct accounts in the correct time period. Consolidation means to combine the accounts of several entities according to accounting rules. When creating users, the administrator specifies how each user is authenticated when the user logs on to Financial Reporting and what actions they can perform. For example, your administrator can define which users can design reports and which users can only view reports. The tool enables administrators to control access at the member level. The limits to the security

filters are capped only by the administrator's creativity. While the security model is robust, managing the filters for extremely large dimension can be a daunting task. Security for Planning is managed through two applications: Shared Services: controls the security groups and user assignments; Hyperion Planning: controls the assignments of groups to dimension members.

After creating objects in the repository, the administrator sets permissions that define which users can view or modify the objects. **Users, groups**, and **roles** are part of the security system. The administrator assigns roles to users to determine the type of user and actions. A *role* is specific to a product's application and is defined based on product functions. A *group* is a collection of related users with similarities, such as geographical location or department within an organization, or who need to share information. A user can belong to multiple groups. You can assign roles through groups. The users in a group inherit the roles that you assign to the group.

Managing security is a balancing act and even more so. On the one hand, the administrator must satisfy management's requirements that only users who need to see the data will have access to the data. On the other hand, the administrator must find a way to ensure the security model can be managed and maintained. These two requirements don't often go hand in hand: Management, of course, wants to implement security on every area of the planning cube. After all, it is natural for management to demand strict secrecy in a planning application. Planning data is extremely sensitive since it describes the future of the company. Management is correct to require complex security rules and segregation of information.; Managing multiple groups along multiple dimensions can be a daunting task. Keeping track of which users go in what group along with the applicable filters requires careful consideration and special attention to details. It is an administrator's nightmare. Administrators often have to rely on spreadsheets to maintain master lists of users, groups, filters, roles, etc.

To help make this task easier, here are a few hints on what does and doesn't work: *Nesting groups within groups* – This method can save a lot of time when setting up the groups. However, it is hard to maintain because individual users do not appear directly in the group.; *ExportSecurity.cmd and ImportSecurity.cmd* – Managing filters in Planning by using the security features in Workspace is cumbersome and slow. Using the ImportSecurity.cmd is easy, quick and efficient. In addition, the source file used to upload the security information can be used for back-up and documentation.; *File system in Shared Services* – Using this utility to make changes to Groups and Users provides the same benefits described in the above item.; *Define groups that mimic the dimension structure* – It is tempting to create a group for every function or team. Using this approach will lead to having a very large number of groups. Mimicking the dimension structure allows the administrator to take advantage of the 'intersection' concept of multi dimensional databases.; *'Super Groups'* – A super group is a group that has all users in it. We can use these groups to control access to the Planning dimensions such as account, version and scenario. Since the Planning dimensions must have security enabled, they may also share the same access for all users.; *Consistent naming conventions* – For clarity and ease of use, it is important to maintain a consistent naming convention.; *Group descriptions* – Make sure to write a clear description of the group when it is set up. This will help later for back-up and documentation.; *Demonstrate the impact of security filters* – Show management the impact of increasing the number of security filters. Making the impact available to management may pay dividends in the future. It will help management to come up with reasonable levels of access.

3. Conclusion

Application security is the security within an application. Security prevents two types of errors: intentional and accidental. Intentional errors are rare, the majority of errors are unintentional or accidental. A large public corporation normally consists of several small entities. The accounting numbers will more likely be correct if accountants are prevented from making unintentional errors by only having the minimum access needed to do their job. As with most of mathematics, Shared Services security is built on set theory. There are two applicable sets: users and metadata. The goal is to associate the users to the metadata and to the application through a role. There are two type of roles: application roles and metadata roles. Application roles provide access to the application through application defined roles. Metadata roles are based on the dimensions, these roles provide access to the data. Each metadata dimension member has an attribute called SecurityClass. This attribute is used to group dimension members for access to data. Although each metadata dimension member has the SecurityClass attribute, security is often only on the Entity dimension. Remark, security is a double edged sword: fine grained security will require more security administrator effort. Windows active directory groups are often used to group users. The advantage to group users is that more than one user will have access in the case of vacations or other absence. As long as there are people in corporations, there will be personnel movement in corporations. Therefore EPM administrators will be kept busy with security changes.

References

1. Monti, M., 1989. *Fiscal Policy, Economic Adjustment, and Financial Markets*. Washington, D.C.: IMF Publication Service.
2. https://blog.topdownconsulting.com/2015/11/oracle-hyperion-security/
3. https://blog.topdownconsulting.com/2011/08/hyperion-planning-security-%E2%80%93-a-balancing-act/.
4. https://blog.topdownconsulting.com/2011/12/hyperion-planning-security-%E2%80%93-managing-filters-for-very-large-dimensions/