

Compass Analytics Database

Your Eagle System captures a wealth of information and allows you to access it through applications or through predefined reports.

As you have learned in the previous Analytics Modules, the Compass applications leverage that data to create a MySQL relational database for custom reporting and analytics.

The goal of this module is to define that relationship and explain how data is updated and what your initial database should look like.

Defining the database and its relationship to Eagle fields will lay the foundation for all future query building and answer the question “where does the data come from?”

So in today’s module we will be looking at database configurations, database updates, and data sources.

There’s a lot to cover so let’s get started.

Topics

- Database Configurations
- Database Updates
- Data Sources

Database Configurations

There are two basic configurations for running the Compass Applications, a single server setup or a dual server setup.

In this configuration below we are looking at a dual server setup.

There is an Eagle Production Server that is operating on the Linux Eagle Operating System, a Compass Analytics Reporting Server which leverages the Technology Foundation Platform, the MySQL (relational database) and XML and Microsoft.Net., and finally you have your Eagle Client that runs your Eagle and through the .Net user interface also runs Compass Analytics.

The Eagle Production Server runs your Eagle applications and stores the Eagle Database for that server’s operation. Now this Eagle production server sends its data to the Compass Analytics Reporting server in a number of ways that we will discuss in the next section of this module.

The Eagle Production server is a flat file database so the Technology Foundation Platform converts that database into the MySQL relational database and hosts it for exclusive use with the Compass Products.

When you are using Eagle applications, they will communicate with the Eagle Production server but when you use any of the Compass applications they communicate with the Compass Analytics database through the .net user interface to access and display the data from the Reporting Server.

If you have a single server setup, this relationship is the same except your server is partitioned into two separate servers, one part Eagle Production Server and another part Compass Analytics Reporting Server.

If you have a separate server, you should note the following:

The Eagle OS is upgraded on both servers and it is preferred to upgrade the Compass Server first.

You need to backup both servers and the Compass Server backup needs to finish before the Eagle.

There is a 100 gigabit network between the servers

And finally the Compass Server maintenance should be configured for Sunday only.

If you are a single server all backup and upgrade procedures remain the same.

Database Updates

During the configuration of the Reporting Server your Local Platform Specialist performed an initial load of the database.

This copied over all of your Eagle Data from the Production Server to the Reporting Server.

After this initial load, the Compass Reporting Server is updated three different ways and it is important to understand the timing of each.

There is a scheduled report that runs nightly, a replication manager, and Real Time updates.

The scheduled report should have been setup with the initial configuration performed by your Local Platform Specialist.

The Eagle Database Report or (EDW) is located in SEQ in the queue called ANALDB.

Some of the data in Compass is derived from data that must first be produced on Eagle through day-end routines.

Because of this, be sure that EDW runs after any other reports that are used to build data used in Compass.

For example, Eagle Business Advisor Summary data is generated on Eagle through report RDI.

If RDI has not finished building the Business Advisor Summary data before EDW is run, Compass Business Advisor will be behind Eagle Business Advisor.

If the EDW report is the only update method being used your data will always be as current as the close of the previous business day.

The other two update methods allow you to have your Compass database refresh throughout the day or as actions occur in the Eagle System.

These need to be configured and it recommended that an Epicor Specialist assist you with this setup to ensure your system can handle the amount of data and bandwidth required.

If replication is enabled your Compass Reporting Server will “Replicate” changes from selected legacy Eagle files such as inventory and customers to corresponding tables in the database.

The updates are applied almost immediately to the database after they’ have been made to the Eagle files, although depending on how many changes are pending, sometimes there may be lag time before the Eagle file changes appear in the database.

The Replication Manager processes record changes, record adds, and record deletes and applies them to the appropriate tables in the database.

Real time updates perform more complex database updates and are applied at preset, short intervals of minutes rather than immediately.

By default, real time updates are applied every 15 minutes but the interval can be configured to be as short as 5 minutes, or much longer.

Currently real time updates are used for updating the Quick Recall detail and summary tables in the database during the day. In the future, more real time updates will be added.

Data Sources

Now that you understand the database configuration and how the database is updated, let's take a look at the data sources.

We learned in a previous module that Compass groups its data sources into data cubes.

Utilizing the drop down menu in the query work area we can view a list of all the available data cubes.

We will not go through every available data cube in this lesson but I would like to point out the logic behind a few of the groupings.

Sales Detail and Sales Transactions are mapped from Quick Recall and provide two different sets of data derived from the Quick Recall Viewer.

If we take a look at Quick Recall in Eagle we can see the logic behind the two data cubes.

When viewing Quick Recall transactions the default view is transaction header information, this is mapped to the "Sales Transaction" data cube.

If in Quick Recall you click the "Details?" Check Box and refresh the grid, you will be able to see the line item detail for all the sales transactions in the grid, this is mapped to "Sales Detail" in Compass Analytics.

Back in Compass Analytics, if we explore the available measures and dimensions in the Sales Detail cube you can see things like terminal, item, dept, class, etc – line item detail of the transactions.

If we explore the Sales Transactions Data Cube, we no longer see line item detail but the transaction header information like invoice total, tender amounts, customer, sales, clerk, etc.

These two data cubes are representations of the two views available in Quick Recall.

You see this same logic applied to other data cubes such as Purchase Order Detail / Purchase Order Header and Order Detail / Order Header.

A very important piece of information relating to data integrity is easily explained through the Sales Detail and Sales Transactions data cubes.

When the Compass database is originally loaded from your Eagle Database, it loads all the information that is AVAILABLE at the time.

Compass then continues to add to that database as your Eagle runs and creates more data, resulting in a complete data repository known as the Compass Reporting Server.

Since Sales Detail and Sales Transactions come from Quick Recall it is very important to note the quick recall constants at the time of the initial load.

You can access these by typing "MQK" into the launch bar of the eagle browser.

If these are set to retain quick recall data for 12 months, you will only have 12 months' worth of Quick Recall sales data when you begin using Compass.

The MQK constants only affect the initial load as Compass can only load what is available.

The Compass Reporting Database will not purge the sales transactions or sales detail data based on the constants.

Data Data Everywhere could have easily been the title of this module but it would have painted an inaccurately intimidating picture of how data is accessed through Compass Analytics.

While there is a wealth of information available, understanding how it gets there, where it comes from, and how it is grouped will help you create queries that are concise and meaningful to your business.

And more importantly you can be confident that you are viewing the most accurate and up to date representation of data.

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Corporate Office

804 Las Cimas Parkway
Austin, TX 78746
USA

Toll Free: +1.888.448.2636
Direct: +1.512.328.2300
Fax: +1.512.278.5590

Latin America and Caribbean

Blvd. Antonio L. Rodriguez #1882 Int. 104
Plaza Central, Col. Santa Maria
Monterrey, Nuevo Leon, CP 64650
Mexico

Phone: +52.81.1551.7100
Fax: +52.81.1551.7117

Europe, Middle East and Africa

No. 1 The Arena
Downshire Way
Bracknell, Berkshire RG12 1PU
United Kingdom

Phone: +44.1344.468468
Fax: +44.1344.468010

Asia

238A Thomson Road #23-06
Novena Square Tower A
Singapore 307684

Singapore
Phone: +65.6333.8121
Fax: +65.6333.8131

Australia and New Zealand

Suite 2 Level 8,
100 Pacific Highway
North Sydney, NSW 2060
Australia

Phone: +61.2.9927.6200
Fax: +61.2.9927.6298