Documentation based on the entities, relationships, and attributes depicted in your ER diagram

1. Artist

- **Attributes:**
  - `ArtistId` (Primary Key)
  - `Name`
  - `AgentId`
  - `MailingAddress1`, `MailingAddress2`
  - `MailingCity`, `MailingStateId`, `MailingCity`
  - `PaymentInfo`
  - `TIN`
  - `AgencyName`
  - `PhysicalAddressCity`, `PhysicalAddressStateId`, `PhysicalGeoLongitude`, `PhysicalGeoLatitude`
  - `IsExclusive`, `ExclusiveStartDate`, `RaceParseDate`, `IsInactive`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `Artist` is linked to `ArtistActType`, `ArtistGenreType`, `ArtistEventType`, `ArtistBlockedDate`, `ArtistPrice`, `ArtistProgramEnroll`, `ArtistSong`, `ArtistFeedback`, `ArtistRelation`, etc.

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2. Blue Card

- **Attributes:**
  - `BlueCardId` (Primary Key)
  - `AgentId`
  - `PresenterId`
  - `AccountName`
  - `OrganizationName`
  - `LeadId`
  - `EventTypeId`
  - `VenueName`, `VenueAddress1`, `VenueAddress2`
  - `VenueCity`, `VenueStateId`, `VenueCountryId`, `VenueSettingId`
  - `VenueCapacity`
  - `IsPublicEvent`
  - `EventBudget`, `EventDate`
  - `Notes`, `IsClosed`, `ClosureReasonId`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `BlueCard` is linked to entities like `BlueCardPromo`, `BlueCardPromoArtist`, `BlueCardArtist`, `Presenter`, `Lead`, `Venue`, etc.

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3. Presenter

- **Attributes:**
  - `PresenterId` (Primary Key)
  - `AgentId`
  - `AccountName`
  - `OrganizationName`
  - `MailingAddress1`, `MailingAddress2`
  - `MailingCity`, `MailingStateId`, `MailingCountryId`
  - `PhysicalAddressCity`, `PhysicalStateId`, `PhysicalCountryId`, `PhysicalGeoLongitude`, `PhysicalGeoLatitude`
  - `IsActive`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `Presenter` is related to `BlueCard`, `PresenterPortal`, `ArtistFeedback`, etc.

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4. Artist Program Enrollment

- **Attributes:**
  - `ArtistProgramEnrollId` (Primary Key)
  - `ArtistProgramId` (Foreign Key)
  - `ArtistId` (Foreign Key)
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `ArtistProgramEnroll` is linked to `ArtistProgramConfig`, `Artist`, and `ArtistProgram`.

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5. Venue

- **Attributes:**
  - `VenueId` (Primary Key)
  - `Name`
  - `VenueTypeId`
  - `VenueSettingId`
  - `MailingAddress1`, `MailingAddress2`
  - `MailingCity`, `MailingStateId`, `MailingCountryId`
  - `PhysicalAddress1`, `PhysicalAddress2`, `PhysicalCity`, `PhysicalStateId`, `PhysicalCountryId`
  - `PhysicalGeoLongitude`, `PhysicalGeoLatitude`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `Venue` is associated with `VenueActType`, `BlueCard`, `NationalOffer`, etc.

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6. Contracts

- **Attributes:**
  - `ContractId` (Primary Key)
  - `ContractStatusId`
  - `AgentId`, `PresenterId`
  - `PresenterMailingAddress1`, `PresenterMailingAddress2`
  - `VenueId`, `VenueTypeId`
  - `VenueCapacity`, `LeadSourceId`
  - `ContractTypeId`, `ContractTermId`
  - `IsOutdoor`, `IsSubstitute`
  - `IsClosed`, `IsCancelled`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `Contract` is related to `ContractArtist`, `ContractPayment`, `ContractTransaction`, `ContractEventDate`, `ContractSignature`, etc.

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7. National Offer

- **Attributes:**
  - `NationalOfferId` (Primary Key)
  - `BlueCardId`, `ArtistId`, `PresenterId`
  - `EventTypeId`, `OfferTypeId`
  - `IsPublicEvent`
  - `IsClosed`
  - `CreatedDate`, `CreatedById`, `UpdatedDate`, `UpdatedById`
- **Relationships:**
  - `NationalOffer` is linked to `NationalOfferArtist`, `NationalOfferEvent`, `NationalOfferTerms`, etc.

Additional Entities (Brief Descriptions)

- **Lu_ActType, Lu_GenreType, Lu_EventType, etc.:**
  - Lookup tables that store the types, genres, and event types.
- **BlueCardPromo, BlueCardPromoArtist, BlueCardPromoArtistFile, etc.:**
  - Tables related to promotional activities associated with Blue Cards.
- **RouteBookArtist, RouteBookGrid:**
  - Entities related to the artist's route booking details.
- **AgentPayment, AgentCommission, PayrollBatch, Payment, etc.:**
  - Tables related to the financial transactions and payroll details.

To focus on data flow explanations and other relevant information, we can break it down into several key areas:

1. Data Flow Explanation

Understanding how data moves through the system is crucial for grasping the entire architecture of your project. Here's how you can document the data flow:

a. Data Entry Points

- **Blue Card Creation:**
  - **Data Inputs:** The process begins when a Blue Card is created. Data such as the presenter''s details, event information, and venue details are entered.
  - **Primary Entities Involved:** `BlueCard`, `Artist`, `Presenter`, `Venue`.
- **Artist Enrollment:**
  - **Data Inputs:** When an artist enrolls in a program, data regarding the artist, program, and enrollment specifics are captured.
  - **Primary Entities Involved:** `ArtistProgramEnroll`, `ArtistProgram`, `Artist`.
- **Contract Creation:**
  - **Data Inputs:** When a contract is created, information about the agreement between the artist, presenter, and venue is captured.
  - **Primary Entities Involved:** `Contract`, `Artist`, `Presenter`, `Venue`.

b. Data Processing

- **Promo and Marketing:**
  - **Data Flow:** Information from the `BlueCardPromo`, `BlueCardPromoArtist`, and related entities is processed to generate promotional materials.
  - **Key Processes:** This includes generating promo content, linking artists to specific promos, and creating web links or files associated with the promo.
- **Financial Transactions:**
  - **Data Flow:** Financial data flows through various entities, including `ContractPayment`, `AgentPayment`, `PayrollBatch`, and related tables.
  - **Key Processes:** Payment processing, commission calculations, and payroll management are handled in this phase.
- **Contract Management:**
  - **Data Flow:** Data related to contracts moves through entities such as `Contract`, `ContractArtist`, `ContractTransaction`, and `ContractEventDate`.
  - **Key Processes:** Contract creation, amendments, and event management are processed here.

c. Data Storage and Retrieval

- **Centralized Storage:**
  - **Entities Involved:** Most of the data is stored across entities like `BlueCard`, `Contract`, `Artist`, `Presenter`, and `Venue`.
  - **Data Retrieval:** Data can be retrieved for reporting, analysis, or further processing through queries against these entities.
- **Historical Data:**
  - **Entities Involved:** Historical data might be stored in entities like `ArchivedContracts`, `OldEventDetails`, or `PastArtistPrograms`.
  - **Data Retrieval:** Useful for generating reports on past performances, events, or financial summaries.

2. Relevant Information for our Project

In addition to data flow, it's important to understand other aspects that might be relevant for our project:

a. System Interactions

- **Internal Systems:**
  - The ER diagram likely represents an internal system where different modules interact with each other. For example, the Artist Module interacts with the Venue and Contract Modules.
- **External Systems:**
  - There could be interactions with external systems, especially for handling payments, marketing campaigns, or external event management tools.

b. Data Integrity and Validation

- **Foreign Key Constraints:**
  - The relationships between entities ensure data integrity. For example, each `BlueCard` must be associated with valid `Artist`, `Presenter`, and `Venue` entries.
- **Data Validation:**
  - Before data is processed (e.g., contract creation, artist enrollment), validation checks should ensure that all required fields are complete and meet predefined criteria.

c. Security and Permissions

- **Access Control:**
  - Define who has access to which parts of the system. For instance, only certain roles might be allowed to create or modify contracts, while others can only view them.

- **Sensitive Data:**
    - Data such as payment information, artist personal details, and contract terms should be securely stored and transmitted.

d. Reporting and Analytics

- **Performance Reports:**
    - Generate reports on artist performances, event success rates, financial summaries, and other key metrics.
- **Dashboards:**
    - Implement dashboards for real-time monitoring of ongoing events, financials, and contract statuses.

e. Auditing and Logging

- **Change Tracking:**
    - Implement logs to track changes made to key entities like `Contract`, `BlueCard`, `Artist`, etc.
- **Audit Trails:**
    - Maintain an audit trail to trace back any modifications or transactions, which is crucial for both security and compliance.

Identifying fact and dimension tables is a key step in designing a data warehouse, especially for reporting and analytics. Here's how we can identify them in your ER diagram:

1. Fact Tables

Fact tables are the core of a star or snowflake schema in a data warehouse. They typically contain quantitative data (measures) that are used for analysis and are often at the intersection of several dimension tables. In your ER diagram, the following entities might be considered as fact tables:

- **BlueCard:**
    - This table could serve as a fact table as it likely records the core event data, such as event type, venue, budget, etc. Each record in the `BlueCard` could be an "event" that occurred, with measures such as budget and number of attendees.
- **Contract:**
    - Contracts can also be treated as fact tables, especially in cases where the contract details (such as amounts, dates, and involved parties) are central to the analysis. The measures here could include the total contract amount, commission percentages, and payments made.
- **NationalOffer:**

    - This table could be considered a fact table if you are analyzing offers on a national scale. Measures might include offer amount, number of offers per region, and the success rate of those offers.
- **ArtistProgramEnroll:**
    - This table could serve as a fact table if you're analyzing artist enrollments in programs. Measures could include the number of enrollments, the total revenue from enrollments, etc.

2. Dimension Tables

Dimension tables contain descriptive attributes (or fields) related to the fact data. They are used to filter, group, and label facts in queries. In your ER diagram, the following entities might serve as dimension tables:

- **Artist:**
    - This table provides detailed information about artists, such as their names, addresses, and agency information. It's a classic dimension table, allowing you to slice your data by different artist attributes.
- **Venue:**
    - This table contains information about venues, including names, locations, and capacities. It helps in analyzing events or contracts based on where they took place.
- **Presenter:**
    - Similar to `Artist`, the `Presenter` table holds descriptive information about presenters, such as their organization name, address, and contact details.
- **EventType (Lu_EventType):**
    - This lookup table provides details about the types of events. It can be used to categorize and analyze events based on their types.
- **GenreType (Lu_GenreType):**
    - This table helps in categorizing and analyzing artists or events based on genres.
- **ActType (Lu_ActType):**
    - This lookup table helps categorize and analyze performances based on their type (e.g., musical act, stand-up comedy, etc.).
- **ContractStatus (Lu_ContractStatus):**
    - This table could be used to analyze contracts based on their status (e.g., active, closed, canceled).

3. Bridge Tables

Bridge tables can also exist in more complex schemas where many-to-many relationships need to be resolved. Some potential bridge tables from your diagram might include:

- **ArtistGenreType:**
    - This resolves the many-to-many relationship between `Artist` and `GenreType`.

- **ArtistActType:**
  - This resolves the many-to-many relationship between `Artist` and `ActType`.
- **BlueCardArtist:**
  - This table likely links `BlueCard` with `Artist` and could serve as a bridge between these two tables.

Summary

- **Fact Tables:** `BlueCard`, `Contract`, `NationalOffer`, `ArtistProgramEnroll`
- **Dimension Tables:** `Artist`, `Venue`, `Presenter`, `Lu_EventType`, `Lu_GenreType`, `Lu_ActType`, `Lu_ContractStatus`
- **Bridge Tables:** `ArtistGenreType`, `ArtistActType`, `BlueCardArtist`

These identifications will help us structure our data warehouse efficiently, ensuring that we can run queries and generate reports that are both meaningful and performant.

1. Agent-Related Analysis

- **BlueCard Table:** Analyze events managed by agents, including revenue, expenses, and overall event performance.
- **Contract Table:** Evaluate contracts managed by agents, linking them to revenue and financial performance.
- **AgentPayment Table:** Assess the payments made to agents and correlate this with their performance.
- **NationalOffer Table:** Review national offers made by agents, assessing their success rate and financial outcomes.
- **ArtistFeedback Table:** Analyze feedback related to artists managed by agents, understanding qualitative aspects of performance.
- **Presenter Table:** Track the relationship between agents and their clients or presenters, including retention and satisfaction.

Conclusion

Although there isn't a dedicated `Agent` table, agent information is dispersed across various tables like `BlueCard`, `Contract`, `AgentPayment`, `NationalOffer`, and others. We can still perform comprehensive agent-related analysis by joining these tables based on `AgentId` and related keys.

This approach will allow us to gather a holistic view of agent performance, including revenue generation, payment tracking, event management, and customer relationships.

2. Calculation Flows:

Here's how these elements might work together in a typical financial transaction:

1. **Gross Amount Calculation:**
    - Start with the gross amount, which might be defined in the `Contract` or `BlueCard` as the total value of the event or booking.
2. **Agent Fee Deduction:**
    - The agent fee is calculated based on the gross amount. This is either a percentage or a fixed fee.
    - The fee is recorded in the `AgentPayment` table.
3. **Artist Fee Deduction:**
    - The artist fee is similarly deducted from the gross amount. This could be predefined in `ArtistPrice` and recorded in the `ArtistPayment` table.
4. **ECE Commission Calculation:**
    - After deducting the agent and artist fees, the remaining amount might be considered for ECE's commission.
    - The commission percentage or amount is applied, and this is recorded in the `CommissionProgram` or `AgentCommission` tables.
5. **Final Profit Calculation:**
    - The final profit for ECE is the gross amount minus the agent fees, artist fees, and any other deductions.

Conclusion

By linking these tables (`BlueCard`, `Contract`, `AgentPayment`, `ArtistPayment`, `CommissionProgram`, `AgentCommission`), we can track the flow of money from the gross amount down to the final commissions and payments made. This structure allows us to perform detailed financial analyses, such as calculating profitability, evaluating agent performance, and ensuring that all fees and commissions are accurately accounted for.

Just querying out some types of data we have in the database.

GeneralLedgerAccountTypeId	Code	Name	IsActive
0	-	User Specified	True
1	A	Asset	True
2	L	Liability	True
3	I	Income	True
4	E	Expense	True

LineOfBusinessId	Name	Description	IsActive
1	National		True
2	Touring		True
3	Core		True
4	Comedy		True

Results Messages

Search to filter items...

OfferRateTypeId	Name	Description	IsActive
1	Flat Offer		True
2	NAGBOR	Net Adjusted Box Office Receipts	True
3	Bonus Program		True

PayrollLogTypeId	Name	Description	IsActive
1	Agent Earned Commission		True
2	Mentor Bonus Commission		True
3	Presenter Transfer Bonus Commission		True
4	Shared Bonus Fee		True
5	Non-Exclusive Artist Fee		True
6	Agent Working Expense		True
7	Cafeteria Plan Deduction		True
8	Team Commission		False
10	Agent Working Expense		True

FeedbackTypeId	FeedbackTypeName	IsActive
1	Problem	True
2	Suggestion	True

ExpensePaymentTy...	Name	Description	IsActive
1	Check	The traditional paper check issued by ECE's banking institution.	True
2	Direct Deposit	If an Artist's bank account details are on file in the new CRM, the payment is directly deposited into account using an A...	True
3	Wire Transfer	For manual payments only, ECE can send payments using a wire transfer.	True

ExpenseBatchTypeId	Name	Description
1	Artist	This batch type encompasses all transactions for Artists including AREFs, Programs, and Loan Repayments.
2	ECE	This batch type encompasses all transactions emanating from RockIt to ECE's Operations Account.
3	Other Expenses	This batch type encompasses all transactions emanating from RockIt to entities that are not Artists or ECE's Operations Account.

ExpenseBatchFileTypeId	Name	Description	IsActive
1	Check	Check	True
2	ACH	ACH	True
3	CheckFile	Check File	True
4	ArtistSummary	Artist Summary	True

EventTicketTypeId	Name	Description	IsActive
1	Soft Ticket		True
2	Hard Ticket		True
3	Subscription Series		True

ContractTypeId	Name	Description	IsActive
1	Standard	Standard	True
2	Special	Special	True

ActTypeId	Name	Abbrevation	IsActive
1	Bands		True
2	Classical		True
3	Comedians		True
4	DJs		True
5	International		True
6	Nationals		True
7	Performing Arts/Theater		True
8	Rock		True
9	Soloist/Duos/Trios		True
10	Specialty Musical		True

AgentCommissionTypeId	Name	Description	IsActive
1	Tiered Cumulative Plan	Tiered Cumulative Plan	True
2	Tiered Dates Plan	Tiered Dates Plan	True
3	Tiered Instance Plan	Tiered Instance Plan	True