**Flight Spanners Data Dictionary**

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| **HolidayType** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| HolidayTypeName | NVARCHAR | 20 | Primary Key | Holiday type name. |
| HolidayTypeConstant | Float | 24 | Not Null | Holiday constant. |

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| **Holiday** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| HolidayName | NVARCHAR | 20 | Primary Key | Holiday name. |
| IsHolidayRepeated | BIT | 1 | Not Null | Holiday repeated or not. |
| HolidayDay | NVARCHAR | 2 |  | Holiday day. |
| HolidayMonth | NVARCHAR | 2 |  | Holiday month. |
| HolidayYear | NVARCHAR | 4 |  | Holiday year. |
| HolidayTypeName | NVARCHAR | 20 | Foreign Key | Holiday type name. |

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| **AircraftType** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| AircraftTypeId | INT | 5 | Primary Key | Aircraft type Id. |
| AircrfatModel | NVARCHAR | 20 | Not Null | Aircraft model. |
| EngineModel | NVARCHAR | 20 | Not Null | Engine model. |
| AircraftTypeCostant | FLOAT | 24 | Not Null | Aircraft type constant. |

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| **ApprovalDetail** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| ApprovalDetailId | INT | 5 | Primary Key | Approval detail Id. |
| ApprovalRating | NVARCHAR | 20 | Not Null | Approval Rating. |
| ApprovalCategory | NVARCHAR | 20 | Not Null | Approval Category. |
| ApprovalCostant | FLOAT | 24 | Not Null | Approval constant. |

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| **Approval** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| ApprovalId | INT | 5 | Primary Key | Approval Id. |
| AircraftTypeId | INT | 5 | Foreign Key, Not Null | Aircraft type Id. |
| SpannerCode | NCHAR | 5 | Foreign Key, Not Null | Spanner code number. |
| ApprovalDetailId | INT | 5 | Foreign Key, Not Null | Approval detail Id. |

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| **Qualification** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| QualificationId | INT | 5 | Primary Key | Qualification Id. |
| QualificationName | NVARCHAR | 20 | Not Null | Qualification name. |
| QualificationDegree | NVARCHAR | 15 | Not Null | Qualification degree. |
| QualificationMajor | NVARCHAR | 15 | Not Null | Qualification major. |
| QualificationCostant | FLOAT | 24 | Not Null | Qualification constant. |

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| **Department** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| DepartmentId | INT | 5 | Primary Key | Department Id. |
| DepartmentName | NVARCHAR | 20 | Unique | Department name. |
| DepartmentCostant | FLOAT | 24 | Not Null | Department constant. |

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| **InActivePeriod** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| InActivePeriodId | INT | 5 | Primary Key | Approval Id. |
| InActiveFromDate | DATE | 8 | Not Null | Starting date of in-active period. |
| InActiveToDate | DATE | 8 | Not Null | End date of in-active period. |
| SpannerCode | NCHAR | 5 | Foreign Key, Not Null | Spanner code number. |

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| **Spanner** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| SpannerLicenseNo | NCHAR | 4 | Unique | Spanner license number. |
| SpannerCode | NCHAR | 5 | Primary Key | Spanner code. |
| GroupId | INT | 5 | Foreign Key | Spanner group id. |
| SpannerFName | NVARCHAR | 20 | Not Null | Spanner first name. |
| SpannerM1Name | NVARCHAR | 20 | Not Null | Spanner first middle name. |
| SpannerM2Name | NVARCHAR | 20 | Not Null | Spanner second middle name. |
| SpannerLName | NVARCHAR | 20 | Not Null | Spanner last name. |
| SpannerGender | NCHAR | 1 | Not Null | Spanner last name. |
| SpannerEmail | NVARCHAR | 30 | Unique | Spanner email. |
| SpannerPassword | NVARCHAR | 100 | Not Null | Spanner authentication password. |
| SpannerMobile1 | NCHAR | 11 | Unique | Spanner first mobile. |
| SpannerMobile2 | NCHAR | 11 |  | Spanner second mobile. |
| SpannerBirthday | DATE | 8 | Not Null | Spanner birthday. |
| SpannerHireDate | DATE | 8 | Not Null | Spanner hire date. |
| IsSpannerViewGroupData | BIT | 1 | Not Null | Spanner could view the data of other spanners of his group data or not. |
| IsSpannerHasCar | BIT | 1 | Not Null | Spanner has private car or not. |
| DepartmentId | INT | 5 | Foreign Key, Not Null | Spanner department Id. |
| QualificationId | INT | 5 | Foreign Key, Not Null | Spanner qualification Id. |

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| **Group** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| GroupId | INT | 5 | Primary Key | Group Id. |
| GroupName | NVARCHAR | 20 | Unique | Group name. |
| RecordStarting | DATE | 8 | Not Null | Group starting date of balance, the previous will be neglected. |
| IsCalculationSectorTime | BIT | 1 | Not Null | Calculate the deserved balance according to default sector time of the flight or according to DistanceType data. |
| GroupCostant | FLOAT | 24 | Not Null | Group constant. |

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| **OrganizerGroup** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| OrganizerGroupId | INT | 5 | Primary Key | Organizer group Id. |
| OrganizerCode | NCHAR | 5 | Foreign Key, Not Null | Organizer code. |
| GroupId | INT | 5 | Foreign Key, Not Null | Group Id. |

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| **Organizer** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| OrganizerCode | NCHAR | 5 | Primary Key | Organizer Code. |
| OrganizerFName | NVARCHAR | 20 | Not Null | Organizer first name. |
| OrganizerM1Name | NVARCHAR | 20 | Not Null | Organizer first middle name. |
| OrganizerM2Name | NVARCHAR | 20 | Not Null | Organizer second middle name. |
| OrganizerLName | NVARCHAR | 20 | Not Null | Organizer last name. |
| OrganizerEmail | NVARCHAR | 30 | Unique | Organizer email. |
| OrganizerPassword | NVARCHAR | 100 | Not Null | Organizer authentication password. |
| OrganizerMobile1 | NCHAR | 11 | Unique | Organizer first mobile. |
| OrganizerMobile2 | NCHAR | 11 |  | Organizer second mobile. |
| OrganizerOccupation | NVARCHAR | 30 |  | Organizer occupation. |

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| **FlightCompany** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| FlightCompanyId | INT | 5 | Primary Key | Flight company Id. |
| FlightCompanyName | NVARCHAR | 20 | Unique | Flight company name. |
| FlightCompanyCostant | FLOAT | 24 | Not Null | Flight company constant. |

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| **DestinationType** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| DestinationTypeId | INT | 5 | Primary Key | Destination type Id. |
| DestinationTypeName | NVARCHAR | 20 | Unique | Destination type name. |
| DestinationTypeCostant | FLOAT | 24 | Not Null | Destination type constant. |

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| **EligibilityType** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| EligibilityTypeId | INT | 5 | Primary Key | Eligibility type Id. |
| EligibilityTypeName | NVARCHAR | 20 | Unique | Eligibility type name. |
| EligibilityTypeCostant | FLOAT | 24 | Not Null | Eligibility type constant. |

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| **FlightRecord** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| FlightRecoedId | INT | 4 | Primary Key | Flight record Id. |
| RecordDate | DATETIME | 8 | Not Null | Record date. |
| FlightDate | DATETIME | 8 | Not Null | Actual flight date. |
| IsRecordSettled | BIT | 1 | Not Null | The record is confirmed to be part of the balance calculation. |
| IsRecordAutoSelected | BIT | 1 | Not Null | The selection of the spanner is not by organizer but by an AI algorithm. |
| FlightDataId | INT | 5 | Foreign Key, Not Null | Flight data Id. |
| OrganizerGroupId | INT | 5 | Foreign Key, Not Null | Organizer group Id. |
| DestinationTypeId | INT | 5 | Foreign Key, Not Null | Destination type Id. |
| EligibilityTypeId | INT | 5 | Foreign Key, Not Null | Eligibility type Id. |
| FlightCompanyId | INT | 5 | Foreign Key, Not Null | Flight company Id. |
| AircraftTypeId | INT | 5 | Foreign Key, Not Null | Aircraft type Id. |
| ApprovalId | INT | 5 | Foreign Key | Approval Id. |

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| **Airport** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| IATACode | CAHR | 3 | Primary Key | IATA code of the airport. |
| ICAOCode | NCHAR | 4 | Unique | ICAO code of the airport. |
| AirportCountry | NVARCHAR | 20 | Not Null | Airport country. |
| AirportCity | NVARCHAR | 20 | Not Null | Airport city name. |
| AirportCityAlternate | NVARCHAR | 20 |  | Airport alternate city name. |

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| **DistanceType** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| DistanceTypeId | INT | 5 | Primary Key | Distance type Id. |
| DistanceTypeName | NVARCHAR | 15 | Unique | Distance type name. |
| DistanceTypeCostant | FLOAT | 24 | Not Null | Distance type constant. |
| UpperSectorTime | FLOAT | 24 |  | Upper limit of the flight one sector time. |
| UpperOperator | NCHAR | 2 |  | Upper operator for the upper sector time. |
| LowerSectorTime | FLOAT | 24 |  | Lower limit of the flight one sector time. |
| LowerOperator | NCHAR | 2 |  | Lower operator for the lower sector time. |

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| **FlightData** | | | | |
| Field Name | Data Type | Length | Constraint | Description |
| FlightDataId | INT | 5 | Primary Key | Flight data Id. |
| AirportOrigin | CAHR | 3 | Foreign Key | The IATA code of the flight origin airport. |
| AirportDestination | CAHR | 3 | Foreign Key | The IATA code of the flight destination airport. |
| DefaultSectorTime | FLOAT | 24 | Not Null | The default one sector time for the flight from origin to destination. |
| FlightDataCostant | FLOAT | 24 | Not Null | Flight data constant. |
| DistanceTypeId | INT | 5 | Foreign Key | Distance type Id. |
| IsFlightLocal | BIT | 1 | Not Null | If the flight is between 2 local airports. |
| IsFlightCargo | BIT | 1 | Not Null | If the flight is cargo type not passenger. |
| FlightBonusCard | INT | 5 |  | Number of bonus card for this flight if any. |