

Product Update 241

# Database Documentation | System



**Exact**<sup>®</sup>  
software





**Product Update 241**

# **Database Documentation | System**

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September 30, 2008

# Preface

To provide a better service for making reports or integrated business solutions, Exact has started with describing the database model of **Exact Globe** and **Exact Synergy Enterprise**. Since the **Exact Globe** product line and the **Exact Synergy Enterprise** product line are based on the same database model, this manual is applicable to both product lines.

The documentation of the database model is intended for a user on consultant level, who knows how **Exact Globe** or **Exact Synergy Enterprise** works and has some knowledge about SQL database structures, but lacks sufficient knowledge and information about the **Exact Globe/Exact Synergy Enterprise** database structure when making reports or integrated business solutions.

The following information will be provided for each table discussed:

1. **A brief description of the purpose of the table**

Most tables have a single purpose. Some tables have multiple purposes.

2. **The fields of the table**

What is stored in the field?

What this field is used for?

3. **The functionalities of the table**

Some tables have multiple purposes. Per table, the different functionalities (if available) are described.

4. **The technical specifications of the fields in the table**

This information can be useful in making reports or business solutions.

5. **Standard SQL queries**

With some standard SQL queries, it will be easy to retrieve the most commonly used data. The standard SQL queries supplied can also be used as the basis for extended or specific SQL queries used in reports and business solutions.

This manual will cover the main System database tables. The database tables described in this manual are based on version 210. It is Exact Software's intention to keep the documentation up to date with the latest developments.



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## Chapter 1 | ItemProcessTypes – Process types



# 1. ItemProcessTypes – Process types

## 1.1 General description

The [ItemProcessTypes] table stores the document category setting for all the process types at system general settings.

## 1.2 ItemProcessTypes field details

### **Description** – Description

The [ItemProcessTypes.Description] field stores the description of the process type.

### **Division** – Division

The [ItemProcessTypes.Division] field is not used yet. It is added for future functionality.

### **DocCategory** – Category

The [ItemProcessTypes.DocCategory] field stores the category of the document for the process type.

### **DocGroup** – Group

The [ItemProcessTypes.DocGroup] field stores the category group of the document for the process type. The [ItemProcessTypes.DocGroup] field refers to the [BacoDiscussionGroups.ID] field.

### **DocSecurity** – Security level

The [ItemProcessTypes.DocSecurity] field stores the security level of the document for the process type.

### **DocSubCategory** – Subcategory

The [ItemProcessTypes.DocSubCategory] field stores the subcategory of the document for the process type.

### **DocumentType** – Document type

The [ItemProcessTypes.DocumentType] field stores the document type of the document for the process type.

### **TaskPrio** – Priority

The [ItemProcessTypes.TaskPrio] field stores the priority of the process type. The [ItemProcessTypes.TaskPrio] field refers to the [RequestPriorities.ID] field.

### **Type** – Type

The [ItemProcessTypes.Type] field stores the type of the specific process.





## Chapter 2 | Search templates



## 2. Search templates

To support search templates on Exact Synergy Enterprise search platform, two new tables [SearchTemplates] and [SearchTemplateFields] are created. However, these tables are also used in templates creation, e.g. process flow templates.

### 2.1 *SearchTemplates – Search Templates*

#### 2.1.1 General description

The [SearchTemplates] table stores the templates created in various functions, e.g. logistics items search templates and process flow templates.

#### 2.1.2 SearchTemplates field details

##### **Description** – Description

The [SearchTemplates.Description] field stores the description of the template.

##### **Division** – Division

The [SearchTemplates.Division] field stores the division code of the current logon. The [SearchTemplates.Division] field stores the numeric value of the [Bedryf.Bednr] field. This field is not used yet. It is added for future functionality.

##### **ID** – ID

The [SearchTemplates.ID] field stores the system generated database record identification number. This field is not functionally used.

##### **Resource** – Resource

The [SearchTemplates.Resource] field stores the ID of the resource when a private template has been created. When a public template has been created, this field stores either 0 or NULL.

##### **SalesCycleID** – Sales cycle

The [SearchTemplates.SalesCycleID] field stores the ID of the sales cycle definition. This column will only have value when the process flow template is created using the sales cycle definition. The [SearchTemplates.SalesCycleID] field refers to the [SalesCycleDefinitions.ID] field.

**Note!** The [SearchTemplates.SalesCycleID] field differentiates the normal process flow template and the process flow template created in sales cycle definition.

**SearchCode** – SearchCode

The [SearchTemplates.SearchCode] field stores the code that indicate the entry point where the template has been created.

**Syscreated** – Created date and time

The [SearchTemplates.Syscreated] field stores the date and time that the template has been created.

**Syscreator** – Creator

The [SearchTemplates.Syscreator] field stores the ID of the resource who created the template. The [SearchTemplates.Syscreator] field refers to the [Humres.Res\_id] field.

**TemplateType** – Template type

The [SearchTemplates.TemplateType] field stores the type of the template. The [SearchTemplates.TemplateType] field can store one of the following values:

Value	Description
0	Visibility (Value is 1 = Visible; Value is 0 = Hide)
1	Control Name

## 2.2 SearchTemplateFields - SearchTemplateFields

### 2.2.1 General description

The [SearchTemplateFields] table stores the information of the fields of the templates.

### 2.2.2 SearchTemplateFields field details

**Division** – Division

The [SearchTemplateFields.Division] field stores the division code of the current logon. The [SearchTemplateFields.Division] field stores the numeric value of the [Bedryf.Bednr] field. This field is not used yet. It is added for future functionality.

**Field** – Field

The [SearchTemplateFields.Field] field stores the name of the field of the template.

**FieldType** – FieldType

The [SearchTemplateFields.FieldType] field stores the data type of the field of the template. The [SearchTemplateFields.FieldType] field can store one of the following values:

Value	Description
0	Visibility (Value is 1 = Visible; Value is 0 = Hide)
1	Control Name
2	Free field Column
3	Total of Free Field column

**ID** – ID

The [SearchTemplateFields.ID] field stores the system generated database record identification number. This field is not functionally used.

**Template** – Template

The [SearchTemplateFields.Template] field stores the ID of the template. The [SearchTemplateFields.Template] field refers to the [SearchTemplates.ID] field.

**Value** – Value

The [SearchTemplateFields.Value] field stores the default value or last value of the field of the template.





## Chapter 3 | KeySets - KeySets



## 3. KeySets - KeySets

### 3.1 *General description*

The [KeySets] table stores the encryption keys in the database for data encryption in Exact Synergy Enterprise. It is used to encrypt the database password of the Crystal user for running reports.

### 3.2 *KeySets field details*

**EncryptionKey** – Encryption key

The [KeySets.EncryptionKey] field stores the key 1 used for encryption.

**ID** – ID

The [KeySets.ID] field stores the system generated database record identification number. This field is not functionally used.

**InitializationVector** – Initialization vector

The [KeySets.InitializationVector] field stores the key 2 used for encryption.





## Chapter 4 | CardSettings - CardSettings



## 4. CardSettings - CardSettings

### 4.1 General description

The [CardSettings] table stores the user personalization changes on account card, resource card and item card. This table is applicable for Exact Synergy Enterprise.

### 4.2 CardSettings field details

#### **ApplicationID** – Application

The [CardSettings.ApplicationID] field stores the ID of the application using the setting.

#### **Division** – Division

The [CardSettings.Division] field stores the company code of the current logon. The [CardSettings.Division] field stores the numeric value of the [Bedryf.Bedmr] field. This field is not used yet. It is added for future functionality.

#### **ID** – ID

The [CardSettings.ID] field stores the system generated database record identification number.

#### **Module** – Module

The [CardSettings.Module] field stores the module name, e.g. CRM, HRM, LOG.

#### **Parameter\_0** – Parameter 1

The [CardSettings.Parameter\_0] field stores the first parameter defined in advance properties.

#### **Parameter\_1** – Parameter 2

The [CardSettings.Parameter\_2] field stores the second parameter defined in advance properties.

#### **Parameter\_2** – Parameter 3

The [CardSettings.Parameter\_3] field stores the third parameter defined in advance properties.

#### **ResourceID** – Resource

The [CardSettings.ResourceID] field stores the user ID. The [CardSettings.ResourceID] field refers to the [Humres.Res\_ID] field.

**SettingType** – Setting type

The [CardSettings.SettingType] field stores the type of setting. The [CardSettings.SettingType] field can store one of the following values:

Value	Description
0	Layout setting
1	Advance properties setting

**Syscreated** – Created date and time

The [CardSettings.Syscreated] field stores the date and time that the card setting has been created.

**Syscreator** – Creator

The [CardSettings.Syscreator] field stores the ID of the resource who created the card setting. The [CardSettings.Syscreator] field refers to the [Humres.Res\_ID] field.

**SysGuid** – SysGuid

The [CardSettings.SysGuid] field stores the Guid ID field generated by the system upon creation of the card setting.

**Sysmodified** – Modified date and time

The [CardSettings.Sysmodified] field stores the date and time that the card setting was last modified. Initially, this field contains the creation date, which is stored in the [CardSettings.Syscreated] field.

**Sysmodifier** – Modifier

The [CardSettings.Sysmodifier] field stores the ID of the resource who last modified the card setting. Initially, this field contains the creator as is stored in the [CardSettings.Syscreator] field. The [CardSettings.Sysmodifier] field refers to the [Humres.Res\_ID] field.

**Timestamp** – Timestamp

The [CardSettings.Timestamp] field stores a system generated timestamp. The timestamp field is regenerated upon every change in the card setting. This field is mainly used for replication purposes.

**Type** – Type

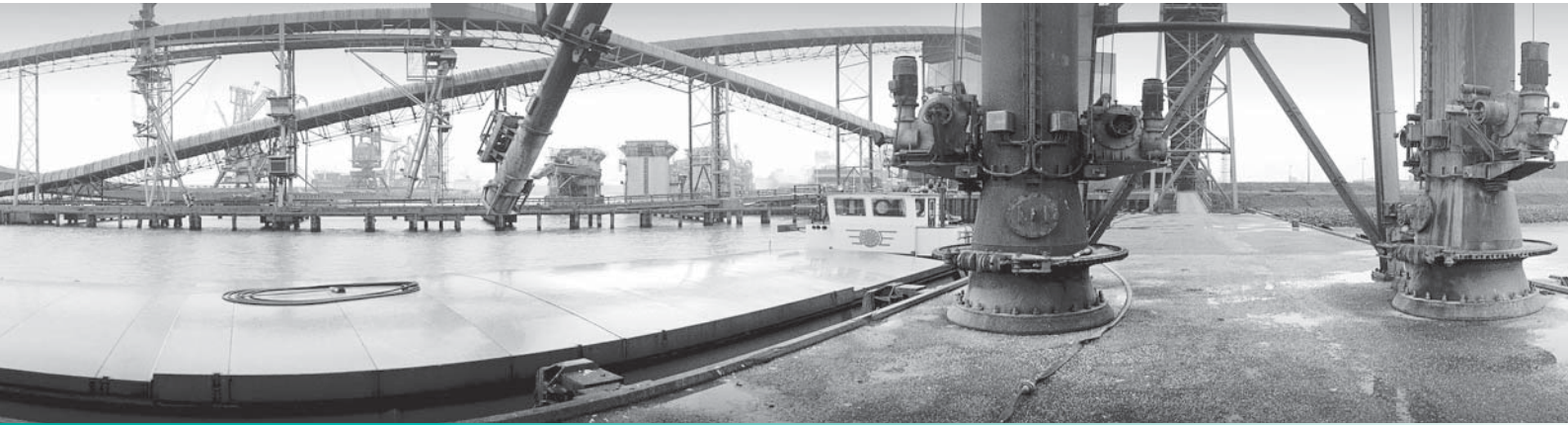
The [CardSettings.Type] field stores the mode of the card. The [CardSettings.Type] field can store one of the following values:

Value	Description
0	New
1	Read
2	Edit

**XMLValue** – XML value

The [CardSettings.XMLValue] field stores the compressed setting of the XML value.





## Chapter 5 | XML Server



# 5. XML Server

## 5.1 XMLTopicDefinitions – XMLTopicDefinitions

### 5.1.1 General Description

The [XMLTopicDefinitions] table stores the definitions for downloading and uploading of XML topics, nodes and list. A list definition is a collection of nodes. For instance, Resources is a list of Resource nodes.

**Note!** The [XMLTopicDefinitions] table is only used in Exact Synergy Enterprise.

### 5.1.2 XMLTopicDefinitions field details

#### AllowCreate – AllowCreate

The [XMLTopicDefinitions.AllowCreate] field indicates if creating new item is allowed. The [XMLTopicDefinitions.AllowCreate] field can store one of the following values:

Value	Description
0	Cannot add new, if item does not exist
1	Can add new, if item does not exist

#### AllowUpdate – AllowUpdate

The [XMLTopicDefinitions.AllowUpdate] field indicates if update is allowed on existing item. The [XMLTopicDefinitions.AllowUpdate] field can store one of the following values:

Value	Description
0	Cannot update, if item exist
1	Can update, if item exist

#### Assembly – Assembly

The [XMLTopicDefinitions.Assembly] field stores the file name of the corresponding assembly (DLL).

#### Class – Class

The [XMLTopicDefinitions.Class] field stores the corresponding class within the define assembly, which is stored in the [XMLTopicDefinitions.Assembly] field.

**Code** – Code

The [XMLTopicDefinitions.Code] field stores the code of the XML item. This code is used as reference name in application, e.g. Journals and Orders.

**Description** – Description

The [XMLTopicDefinitions.Description] field stores the description of the XML item.

**DescriptionTermID** – Description term ID

The [XMLTopicDefinitions.DescriptionTermID] field stores the term ID of the description, which is stored in the [XMLTopicDefinitions.Description] field.

**FunctionPoint** – Function rights

The [XMLTopicDefinitions.FunctionPoint] field stores the function rights required to use the corresponding item. Users having this function rights will be able to perform upload/download on the corresponding XML item.

**ID** – ID

The [XMLTopicDefinitions.ID] field stores the system generated database record identification number. This field is not functionally used.

**List** – List

The [XMLTopicDefinitions.List] field is reserved to store the list matching the node.

**PageSize** – Page size

The [XMLTopicDefinitions.PageSize] field stores the size of data being downloaded. For example, if page size equals to 250, the data being downloaded will be 250 records.

**Scenario** – Scenario

The [XMLTopicDefinitions.Scenario] field stores the replication mode of the XML item, between Globe and Exact Synergy Enterprise. This code is used by background job. The [XMLTopicDefinitions.Scenario] field can store one of the following values:

Value	Description
-1	Disabled
0	Both
1	From Synergy (to Globe)
2	To Synergy (from Globe)

**Type** – Type

The [XMLTopicDefinitions.Type] field stores the type of the XML item. The [XMLTopicDefinitions.Type] field can store one of the following values:

Value	Description
0	Topic
1	List
2	Node

## 5.2 XMLEvents – XML Events

### 5.2.1 General Description

The [XMLEvents] table stores the results of the XML events, which are the scheduled XML import or export that has been performed in batches.

### 5.2.2 XMLEvents field details

**BatchID** – Batch

The [XMLEvents.BatchID] field stores the batch ID of the XML import/export.

**CompanyCode** – Company

The [XMLEvents.CompanyCode] field stores the division code linked to the XML import/export. The [XMLEvents.CompanyCode] field refers to the [Bedryf.Bedrn] field.

**DataKey** – Key

The [XMLEvents.DataKey] field stores the key of the record.

**DataKeyAlt** – Alternative key

The [XMLEvents.DataKeyAlt] field stores the alternative key of the record.

**Note!** The [XMLEvents.DataKeyAlt] field is only applicable for Exact Synergy Enterprise.

**Division** – Division

The [XMLEvents.Division] field stores the division code of the current logon. The [XMLEvents.Division] field stores the numeric value of the [Bedryf.Bedrn] field. This field is not used yet. It is added for future functionality.

**EventData** – Date

The [XMLEvents.EventDate] field stores the date for which the XML import/export has been performed.

**EventDescription** – Description

The [XMLEvents.EventDescription] field stores the message raised by the XML import/export.

**EventType** – Type

The [XMLEvents.EventType] field stores the type of the XML import/export. The [XMLEvents.EventType] field can store one of the following values:

Value	Description
0	Error
1	Warning
2	Message
4	Confirmation

**HumresID** – Resource

The [XMLEvents.HumresID] field stores the ID of the resource for which has performed the XML import/export. The [XMLEvents.HumresID] field refers to the [Humres.Res\_ID] field.

**ID** – ID

The [XMLEvents.ID] field stores the system generated database record identification number. This field is not functionally used.

**ImportExport** – Source

The [XMLEvents.ImportExport] field stores the source of the XML event. The [XMLEvents.ImportExport] field can store one of the following values:

Value	Description
E	Export
I	Import

**Node** – Node

The [XMLEvents.Node] field stores the XML node involved in the XML import/export.

**Topic** – Topic

The [XMLEvents.Topic] field stores the XML topic involved in the XML import/export.

**XMLNode** – XML node

The [XMLEvents.XMLNode] field stores the whole node with containing data where the XML event occurred in.

**Note!** The [XMLEvents.XMLNode] field is only applicable for Exact Synergy Enterprise.





## Chapter 6 | Relation tables



## 6. Relation tables

For a quick search on relations between similar entities, we have introduced relation tables in Exact Synergy Enterprise. Three new tables are introduced to store (grand)parent – (grand)child relationships. These tables will make queries to retrieve data easier. Examples of such queries are:

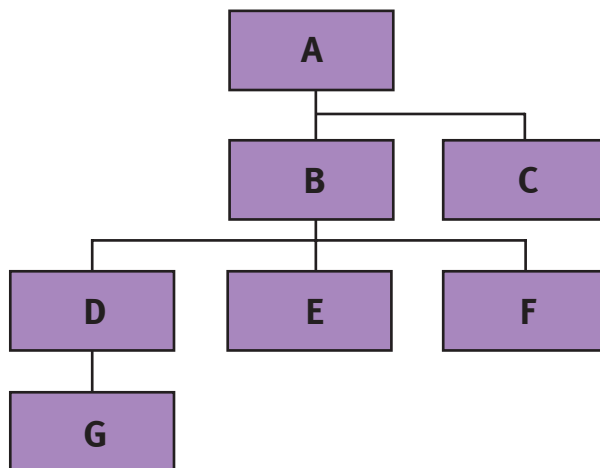
- Search a document category and all its child-categories
- Display a resource with all his subsidiaries in a tree view
- Get the top 100 accounts including subsidiaries with most revenue

All the tables have four fields, which are:

- Type: Type of the relation (1 = Accounts, 2 = Resources, 3 = Projects, 4 = DocumentCategories, 5 = ReportCategories)
- ID/Code: Child ID
- Parent: Parent ID of Child ID
- Level: Level of the relationship (0 = record itself, 1 = parent, 2 = grandparent, 3 = grand-grandparent, etc)

The table contains each (grand)child - (grand)parent pair. Note that each record of the base table is also included as a "self-relation" with Parent = ID.

**Example:**



The tree diagram above will lead to the following relationships in [GuidRelations] table:

Parent	ID	Level
A	A	0
A	B	1
A	C	1
A	D	2
A	E	2
A	F	2
A	G	3
B	B	0
B	D	1
B	E	1
B	F	1
B	G	2
C	C	0
D	D	0
D	G	1
E	E	0
F	F	0
G	G	0

## 6.1 *GuidRelations* – *GuidRelations*

### 6.1.1 General Description

The [GuidRelations] table stores these relations for the entities, which have a Guid as primary key:

- Document categories – Not (yet) implemented
- Accounts
- Crystal report categories

### 6.1.2 GuidRelations field details

**ID** – ID

The [GuidRelations.ID] field stores the child ID of the relation.

**Level** – Level

The [GuidRelations.Level] field stores the level of the relationship.

**Parent** – Parent

The [GuidRelations.Parent] field stores the parent ID of the relation.

**Type** – Type

The [GuidRelations.Type] field stores the type of the relation.

## 6.2 StringRelations – StringRelations

### 6.2.1 General Description

The [StringRelations] table stores relations for entities, which have a char or varchar as primary key:

- Projects

### 6.2.2 StringRelations field details

**Code** – Code

The [StringRelations.Code] field stores the child ID of the relation.

**Level** – Level

The [StringRelations.Level] field stores the level of the relationship.

**Parent** – Parent

The [StringRelations.Parent] field stores the parent ID of the relation.

**Type** – Type

The [StringRelations.Type] field stores the type of the relationship.

## 6.3 *INTEGERRELATIONS – INTEGERRELATIONS*

### 6.3.1 GENERAL DESCRIPTION

The [IntegerRelations] table stores the relations for entities, which have an integer as primary key:

- Resources

### 6.3.2 INTEGERRELATIONS FIELD DETAILS

#### **ID** – ID

The [IntegerRelations.ID] field stores the child ID of the relation.

#### **Level** – Level

The [IntegerRelations.Level] field stores the level of the relationship.

#### **Parent** – Parent

The [IntegerRelations.Parent] field stores the parent ID of the relation.

#### **Type** – Type

The [IntegerRelations.Type] field stores the type of the relationship.

## 6.4 *SESSIONCONTEXT – SESSION CONTEXT*

### 6.4.1 GENERAL DESCRIPTION

The [SessionContext] table stores the data replication information of the systems whereby the data is taken from one system and then transformed and mapped into a new system. Thus the [SessionContext] table can retrieve entities in bulk.

### 6.4.2 SESSIONCONTEXT FIELD DETAILS

#### **EntityName** – Entity name

The [SessionContext.EntityName] field stores the name of the entity that is being retrieved.

#### **ID** – ID

The [SessionContext.ID] field stores the session ID for the retrieval process.

**LastAccessedDate** – Last accessed date

The [SessionContext.LastAccessedDate] field stores the timestamp for the last accessed date of the set.

**LastKeyRetrieved** – Last key retrieved

The [SessionContext.LastKeyRetrieved] field stores the value of the lastkey to be used in the next process to retrieve the remaining values of the session.

**Query** – Query

The [SessionContext.Query] field stores the SQL statement for filtering purposes.





## Chapter 7 | MAILMESSAGES – MAIL MESSAGE



# 7. MAILMESSAGES – MAIL MESSAGE

## 7.1 GENERAL DESCRIPTION

## 7.2 MAILMESSAGE FIELD DETAILS

The [MailMessages] table stores the emails of the users from Microsoft Office add-in 2007 to Exact Synergy Enterprise as documents. This table also stores the additional information of the email messages such as subject, from, to, and CC.

### **CC** – CC

The [MailMessages.CC] field stores the name of the person who will receive the email message.

### **DocumentID** – Document ID

The [MailMessages.DocumentID] field stores the ID of the document that is attached to the email message.

### **ID** – ID

The [MailMessages.ID] field stores the ID of the email message.

### **MailFrom** – Mail from

The [MailMessages.MailFrom] field stores the name of the person who sent the email message.

### **MailTo** – Mail to

The [MailMessages.MailTo] field stores the name of the person who will receive the email message.

### **OnBehalf** – On behalf

The [MailMessages.OnBehalf] field stores the name of the person who will be sending the email message on behalf of another person.

### **SentOn** – Sent on

The [MailMessages.SentOn] field stores the date and time the email message was sent to the recipient.

### **Subject** – Subject

The [MailMessages.Subject] field stores the subject of the email message.

### **Version** – Version

The [MailMessages.Version] field stores the version of the email message.





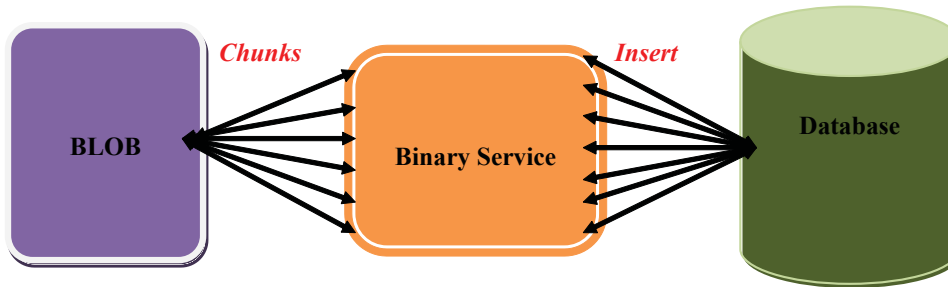
## Chapter 8 | BINARY MESSAGES TABLES



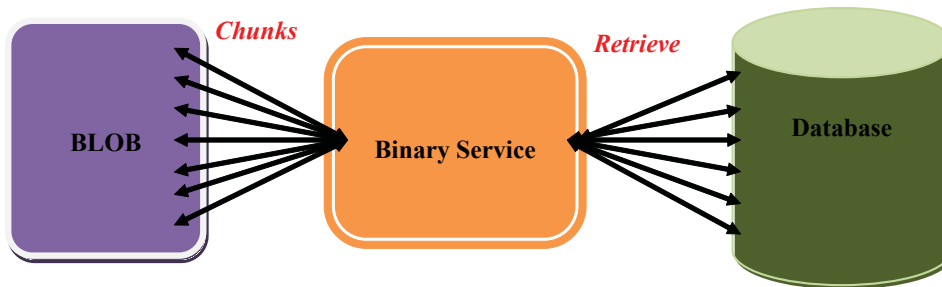
# 8. BINARY MESSAGES TABLES

Several tables based on binary large object (BLOB) are introduced in Exact Synergy Enterprise. BLOB is a large photo, document, audio, and many others that you want to be saved in the database. However, the BLOB may be very large and if you try to move it in one piece it will consume a lot of system memory which will affect application performance. Thus to reduce the amount of system memory used, the BLOB must be broken down into smaller pieces called chunk. Therefore, the Binary Service is required to split the BLOB into chunks and send it via web services to be updated to the database. To retrieve BLOB from the database, the binary data must be retrieved in chunks until all the binary data is retrieved from the database.

Uploading of binary data:



Downloading of binary data:



## 8.1 *BINARYINCOMINGMESSAGES – BINARY INCOMING MESSAGES*

### 8.1.1 GENERAL DESCRIPTION

The [BinaryIncomingMessages] table stores the details of the binary message header for the upload of binary data to the binary service component. This includes creating, saving, and updating of binary large object (BLOB).

### 8.1.2 BINARYINCOMINGMESSAGES FIELD DETAILS

**CreatedDate** – Created date

The [BinaryIncomingMessages.CreatedDate] field stores the date and time the binary message header for upload was created.

**MessageID** – Message ID

The [BinaryIncomingMessages.MessageID] field stores the ID of the binary message header for upload.

**Transferred** – Transferred

The [BinaryIncomingMessages.Transferred] field determines whether the binary data chunks from the [BinaryIncomingChunks.Data] field are combined successfully. The value “1” means that the binary data chunks are combined successfully and value “0” means that the binary data chunks are not combined successfully.

**Note:** Currently this field is not used.

## 8.2 *BINARYINCOMINGCHUNKS – BINARY INCOMING CHUNKS*

### 8.2.1 GENERAL DESCRIPTION

The [BinaryIncomingChunks] table stores the details of the binary data chunks for uploading.

### 8.2.2 BINARYINCOMINGCHUNKS FIELD DETAILS

**CreatedDate** – Created date

The [BinaryIncomingChunks.CreatedDate] field stores the date and time the binary data chunks for upload were created.

**Data** – Data

The [BinaryIncomingChunks.Data] field stores the data of the binary data chunks for upload.

**MessageID** – Message ID

The [BinaryIncomingChunks.MessageID] field stores the ID of the binary data chunks for upload.

**Sequence** – Sequence

The [BinaryIncomingChunks.Sequence] field stores the sequence of the binary data chunks that will be uploaded.

## 8.3 *BINARYOUTGOINGMESSAGES – BINARY OUTGOING MESSAGES*

### 8.3.1 GENERAL DESCRIPTION

The [BinaryOutgoingMessages] table stores the details of the message header for the download of binary data to the binary service component. This includes retrieving of binary large object (BLOB).

### 8.3.2 BINARYOUTGOINGMESSAGES FIELD DETAILS

**CreatedDate** – Created date

The [BinaryOutgoingMessages.CreatedDate] field stores the date and time the binary message header for download was created.

**MessageID** – Message ID

The [BinaryOutgoingMessages.MessageID] field stores the ID of the binary message header for download.

## 8.4 *BINARYOUTGOINGCHUNKS – BINARY OUTGOING CHUNKS*

### 8.4.1 GENERAL DESCRIPTION

The [BinaryOutgoingChunks] table stores the details of the binary data chunks for downloading.

### 8.4.2 BINARYOUTGOINGCHUNKS FIELD DETAILS

**CreatedDate** – Created date

The [BinaryOutgoingChunks.CreatedDate] field stores the date and time the binary data chunks for download were created.

**Data** – Data

The [BinaryOutgoingChunks.Data] field stores the data of the binary data chunks for download.

**MessageID** – Message ID

The [BinaryOutgoingChunks.MessageID] field stores the ID of the binary data chunks for download.

**Sequence** – Sequence

The [BinaryOutgoingChunks.Sequence] field stores the sequence of the binary data chunks that will be downloaded.



## Chapter 9 | FIELD PROPERTIES



## 9. Field properties

This section will give a technical overview of the database fields and the way they are used. If the field described has a reference to another table or field, the referenced field is also mentioned.

### 9.1 *ItemProcessTypes*

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
Description	Description		nvarchar	60	Yes	4243	
Division	Division		smallint		Yes	64	
DocCategory	Category		nvarchar	30	Yes	1205	
DocGroup	Group	BacoDiscussionGroups.ID	int		Yes	2560	
DocSecurity	Security level		int		No	209	(10)
DocSubCategory	Subcategory		nvarchar	30	Yes	83	
DocumentType	Document type		Int		No		0
TaskPrio	Priority	RequestPriorities.ID	int		No	3217	(3)
Type	Type		int		No	3801	

### 9.2 *Search templates*

#### 9.2.1 SearchTemplates

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
Description	Description		nvarchar	60	No		
Division	Division		smallint		Yes		
ID	ID		uniqueidentifier		No		
Resource	Resource		int		Yes		
SalesCycleID	SalesCycleID	OpportunitySalesCycles.ID	int		Yes		
SearchCode	SearchCode		nchar	8	No		
syscreated	Created date and time		datetime		Yes		getdate()

*SearchTemplates*

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
syscreator	Creator	humres.res_id	int		Yes		
TemplateType	Template type		Tinyint		No		0

**9.2.2 SearchTemplateFields**

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
Division	Division		smallint		Yes		
Field	Field		nVarchar	40	No		
FieldType	FieldType		int		No		
ID	ID		uniqueidentifier		No		newid()
Template	Template		uniqueidentifier		No		
Value	Value		nvarchar	255	Yes		

**9.3 KeySets**

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
EncryptionKey	Encryption key		uniqueidentifier		No		
ID	ID		int		No		
InitializationVector	Initialization vector		uniqueidentifier		No		

**9.4 CardSettings**

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
ApplicationID	Application		smallint		No		(0)
Division	Division		smallint		Yes		
ID	ID		int		No		
Module	Module		nchar	3	No		
Parameter_0	Parameter 1		nvarchar	30	Yes		
Parameter_1	Parameter 2		nvarchar	30	Yes		

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
Parameter_2	Parameter 3		nvarchar	30	Yes		
ResourceID	Resource	humres.res_id	int		No		(0)
SettingType	Setting type		tinyint		No		(0)
syscreated	Created date and time		datetime		No		getdate()
syscreator	Creator	humres.res_id	int		No		(0)
sysguid	SysGuid		uniqueidentifier		No		newid()
sysmodified	Modified date and time		datetime		No		getdate()
sysmodifier	Modifier	humres.res_id	int		No		(0)
timestamp	Timestamp		timestamp		Yes		
Type	Type		tinyint		No		(0)
XMLValue	XML value		nVarchar		Yes		

## 9.5 XML Server

### 9.5.1 XMLTopicDefinitions

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
AllowCreate	AllowCreate		bit		No		(1)
AllowUpdate	AllowUpdate		bit		No		(1)
Assembly	Assembly		nvarchar	60	Yes		
Class	Class		nvarchar	60	Yes		
Code	Code		nvarchar	30	No		
Description	Description		nvarchar	60	No		
DescriptionTermID	DescriptionTermID		int		Yes		
FunctionPoint	FunctionPoint		int		Yes		
ID	ID		uniqueidentifier		No		
List	List		nvarchar	30	Yes		
PageSize	PageSize		int		No		(100)
Scenario	Scenario		int		No		(0)
Type	Type		int		No		(0)

## 9.5.2 XMLEvents

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
BatchID	Batch		int		No	4007	
CompanyCode	Company	bedryf.bednr	nchar	3	No	9608	
DataKey	Key		nvarchar	40	Yes	5330	
DataKeyAlt	Alternative key		nvarchar	40	Yes		
Division	Division		smallint		Yes		
EventDate	Date		datetime		No	8516	getdate()
EventDescription	Description		nvarchar	1000	Yes	4243	
EventType	Type		int		No	3801	
HumresID	Resource	humres.res_id	int		No	12	
ID	ID		uniqueidentifier		No	31212	newid()
ImportExport	Source		nchar	1	Yes		
Node	Node		nvarchar	30	Yes	0	
Topic	Topic		nvarchar	30	Yes	7062	
XMLNode	XML node		nvarchar		Yes		

## 9.6 Relation tables

### 9.6.1 GuidRelations

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
ID	ID		uniqueidentifier		No		
Level	Level		tinyint		No		
Parent	Parent		uniqueidentifier		No		
Type	Type		smallint		No		

### 9.6.2 StringRelations

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
Code	Code		nvarchar	30	No		
Level	Level		tinyint		No		
Parent	Parent		nvarchar	30	No		
Type	Type		smallint		No		

### 9.6.3 IntegerRelations

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
ID	ID		int		No		
Level	Level		tinyint		No		
Parent	Parent		int		No		
Type	Type		smallint		No		

### 9.6.4 SESSIONCONTEXT

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
EntityName	Entity name		nVarchar	30	Yes		
ID	ID		int		No		
LastAccessedDate	Last accessed date		Datetime		No		
LastKeyRetrieved	Last key retrieved		nVarchar	255	Yes		
Query	Query		nVarchar		Yes		

## 9.7 MAILMESSAGE

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
CC	CC		Nvarchar		Yes		
DocumentID	Document ID		Uniqueidentifier		No		
ID	ID		Uniqueidentifier		No		
MailFrom	Mail from		Nvarchar	512	Yes		
MailTo	Mail to		Nvarchar		Yes		
OnBehalf	On behalf		Nvarchar		Yes		
SentOn	Sent on		Datetime		Yes		
Subject	Subject		Nvarchar	256	Yes		
Version	Version		Nvarchar	20	Yes		

## 9.8 Binary Messages Table

### 9.8.1 BINARYINCOMINGMESSAGES

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
CreatedDate	Created date		Datetime		No		
MessageID	Message ID		Uniqueidentifier		No		
Transferred	Transferred		Bit		No		0

### 9.8.2 BINARYINCOMINGCHUNKS

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
CreatedDate	Created date		Datetime		No		
Data	Data		Varbinary		No		
MessageID	Message ID		Uniqueidentifier		No		
Sequence	Sequence		Int		No		

### 9.8.3 BINARYOUTGOINGMESSAGES

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
CreatedDate	Created date		Datetime		No		
MessageID	Message ID		Uniqueidentifier		No		

### 9.8.4 BINARYOUTGOINGCHUNKS

Field name	Description	Reference	Data type	Length	Nullable	Term ID	Default
CreatedDate	Created date		Datetime		No		
Data	Data		Varbinary		No		
MessageID	Message ID		Uniqueidentifier		No		
Sequence	Sequence		Int		No		





## Chapter 10 | SAMPLE SQL QUERIES



# 10. SAMPLE SQL QUERIES

This section will list some SQL queries for retrieving data from the System tables. These queries can also be used as the basis for more complex reports or business solutions. Some basic knowledge of the Transact-SQL syntax is required to work with these examples.

## 10.1 *ItemProcessTypes*

1. Query to retrieve all the process types.

```
SELECT ItemProcessTypes.Type, ItemProcessTypes.Description, BacoDiscussionGroups.Description, ItemProcessTypes.
DocSecurity, ItemProcessTypes.TaskPrio, RequestPriorities.Description
FROM ItemProcessTypes
LEFT OUTER JOIN BacoDiscussionGroups ON ItemProcessTypes.DocGroup = BacoDiscussionGroups.ID
INNER JOIN RequestPriorities ON ItemProcessTypes.TaskPrio = RequestPriorities.ID
ORDER BY ItemProcessTypes.Type
```

## 10.2 *Search templates*

1. Query to retrieve templates based on creator and search code order by description of the templates.

```
SELECT SearchTemplates.Description
FROM SearchTemplates
WHERE SearchTemplates.syscreator=1
AND SearchTemplates.SearchCode='LOGSrc'
ORDER BY SearchTemplates.Description
```

2. Query to retrieve template base on ID 'C8CB54F0-71FC-4D61-BD04-6C41BA6B3055'.

```
SELECT SearchTemplates.Description
FROM SearchTemplates
WHERE SearchTemplates.ID= 'C8CB54F0-71FC-4D61-BD04-6C41BA6B3055'
```

3. Query to retrieve the information of the search fields for template "C8CB54F0-71FC-4D61-BD04-6C41BA6B3055".

```
SELECT SearchTemplateFields.FieldType, SearchTemplateFields.Field, SearchTemplateFields.Value
FROM SearchTemplateFields
WHERE SearchTemplateFields.Template = 'C8CB54F0-71FC-4D61-BD04-6C41BA6B3055'
```

### 10.3 KeySets

1. Query to retrieve the key and initialization vector from the database.

```
SELECT KeySets.EncryptionKey, KeySets.InitializationVector
FROM KeySets
WHERE KeySets.ID = 1
```

### 10.4 CardSettings

1. Query to retrieve the setting value for employee on active customer account with advance properties setting in combination of account type, account status and security level.

```
SELECT CardSettings.Module, CardSettings.Type, CardSettings.Parameter_0, CardSettings.Parameter_1, CardSettings.
Parameter_2, CardSettings.XMLValue, CardSettings.ResourceID, CardSettings.syscreator, CardSettings.syscreated,
CardSettings.sysmodifier, CardSettings.sysmodified
FROM CardSettings
WHERE CardSettings.Module = 'CRM'
AND CardSettings.ApplicationID=0
AND CardSettings.SettingType=1
AND CardSettings.Type=1
AND CardSettings.ResourceID=0
AND CardSettings.Parameter_0 = 'C'
AND CardSettings.Parameter_1= 'A'
AND CardSettings.Parameter_2=10
```

2. Query to retrieve the corporate layout setting for applicant card in new mode.

```
SELECT CardSettings.Module, CardSettings.Type, CardSettings.Parameter_0, CardSettings.Parameter_1, CardSettings.
Parameter_2, CardSettings.XMLValue, CardSettings.ResourceID, CardSettings.syscreator, CardSettings.syscreated,
CardSettings.sysmodifier, CardSettings.sysmodified
FROM CardSettings
WHERE CardSettings.Module = 'HRM'
AND CardSettings.ApplicationID=0
AND CardSettings.SettingType=0
AND CardSettings.Type= 0
AND CardSettings.ResourceID = 0
AND CardSettings.Parameter_0= 'NA'
AND CardSettings.Parameter_1 ISNULL
AND CardSettings.Parameter_2= 0
```

## 10.5 XML Server

1. Query to retrieve the XML topics definitions.

```
SELECT XMLTopicDefinitions.Code, XMLTopicDefinitions.DescriptionTermID, XMLTopicDefinitions.FunctionPoint,
XMLTopicDefinitions.Scenario, BacoFunctions.Description
FROM XMLTopicDefinitions
LEFT OUTER JOIN BacoFunctions ON XMLTopicDefinitions.FunctionPoint = BacoFunctions.ID
WHERE XMLTopicDefinitions.Type=1
```

2. Query to select all results of the XML events based on division code '943' and batch ID between 3 and 52.

```
SELECT XMLEvents.Topic, XMLEvents.BatchID, humres.res_id, humres.fullname, COUNT(*) AS Messages, COUNT(CASE
WHEN XMLEvents.EventType = 0 THEN 0 END) AS Errors, MAX(XMLEvents.EventDate) AS Date, XMLTopicsDefinition.
TermID
FROM XMLEvents
INNER JOIN humres ON XMLEvents.HumresID = humres.res_id
LEFT JOIN XMLTopicsDefinition ON XMLEvents.Topic = XMLTopicsDefinition.Topic
WHERE XMLEvents.CompanyCode = '943'
AND XMLEvents.BatchID BETWEEN 3 AND 52
GROUP BY XMLEvents.Topic, XMLEvents.BatchID, humres.res_id, humres.fullname, XMLTopicsDefinition.TermID
ORDER BY XMLEvents.BatchID DESC
```

- Query to retrieve details of a particular batch ID '52'.

```
SELECT XMLEvents.ID, (CASE XMLEvents.EventType WHEN 0 THEN 'Error' WHEN 1 THEN 'Warning' WHEN 2 THEN
'Message' END) AS Type, XMLEvents.EventDate, XMLEvents.Node, XMLEvents.DataKey, XMLEvents.EventDescription,
XMLTopicsDefinition.TermID, (CASE XMLEvents.EventType WHEN 0 THEN 4467 WHEN 1 THEN 3749 WHEN 2 THEN 1778
END) AS MessageTerm
FROM XMLEvents
LEFT OUTER JOIN XMLTopicsDefinition ON XMLTopicsDefinition.Topic = XMLEvents.Node
WHERE XMLEvents.BatchID = '52'
ORDER BY XMLEvents.EventDate
```

## 10.6 Relation tables

- Query to retrieve all relations for the entities, which have a Guid as primary key.

```
SELECT *
FROM GuidRelations
```

- Query to retrieve all relations for entities, which have a nchar or nvarchar as primary key.

```
SELECT *
FROM StringRelations
```

- Query to retrieve all relations for entities, which have an integer as primary key.

```
SELECT *
FROM IntegerRelations
```

- Query to retrieve all subordinates of a resource with ID '80213'.

```
SELECT humres.res_id, humres.FullName, humres.emp_type
FROM humres
INNER JOIN IntegerRelations ON IntegerRelations.Type = 2
AND humres.res_id = IntegerRelations.ID
WHERE IntegerRelations.Parent = '80213'
```

## 10.7 SESSIONCONTEXT

1. Query to retrieve the number of entities with ID equal to “0”.

```
SELECT count
FROM SessionContext
WHERE ID=0
```

## 10.8. MAILMESSAGES

1. Query to retrieve email header for document without versioning or active document with versioning.

```
SELECT mm.Subject, mm.MailFrom, mm.MailTo, mm.CC, mm.OnBehalf, mm.SentOn
FROM BacoDiscussions doc
LEFT OUTER JOIN MailMessages mm ON doc.ID = mm.DocumentID
AND (doc.Version=mm.Version OR mm.Version IS NULL)
WHERE doc.ID = 'aa6bad33-1943-47ad-beb3-5d4d9d0f453b'
```

2. Query to retrieve email header for non-active document with versioning.

```
SELECT mm.Subject, mm.MailFrom, mm.MailTo, mm.CC, mm.OnBehalf, mm.SentOn
FROM BacoDiscussions doc
LEFT OUTER JOIN MailMessages mm ON doc.ID = mm.DocumentID AND mm.Version='1'
WHERE doc.ID = '8ab5cc36-cdad-4766-8691-605278d9a442'
```

## 10.9. BINARY MESSAGES TABLES

1. Query to retrieve binary data header for upload with MessageID '7525B029-8572-4BE2-92AE-9809A596DC9C'.

```
SELECT * FROM BinaryIncomingMessages  
WHERE MessageID = '7525B029-8572-4BE2-92AE-9809A596DC9C'
```

2. Query to retrieve binary data chunks for upload with MessageID '7525B029-8572-4BE2-92AE-9809A596DC9C'.

```
SELECT Sequence, Data, CreatedDate  
FROM BinaryIncomingChunks  
WHERE MessageID = '7525B029-8572-4BE2-92AE-9809A596DC9C'
```

3. Query to retrieve binary data header for download with MessageID '594667D4-E7DD-4882-A89E-16AFDA66015F'.

```
SELECT * FROM BinaryOutgoingMessages  
WHERE MessageID = '594667D4-E7DD-4882-A89E-16AFDA66015F'
```

4. Query to retrieve binary data chunks for download with MessageID '594667D4-E7DD-4882-A89E-16AFDA66015F'.

```
SELECT Sequence, Data, CreatedDate  
FROM BinaryIncomingChunks  
WHERE MessageID = '594667D4-E7DD-4882-A89E-16AFDA66015F'
```





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