Baan E-Service Remote 2.0
Master Data Synchronization Guide
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This document describes how to install and use the database synchronization solution together with Baan E-Service Remote 2.0.

This document contains the following chapters:

Chapter 1, "Introduction," describes the problems and the architecture of the synchronization solution.

Chapter 2, "Create Master Data," explains the functionality of MasterDataCreation.

Chapter 3, "Synchronization Master Data," describes the functionality of MasterDataSynchronization.
To work with Baan E-Service Remote 2.0, the client users must have two types of data, master data and transactional data.

The transactional data, which contains for example service activities, is downloaded to the client computers with the BackOffice Interface (BOIs) as illustrated in the following figure (see Figures 1-1 and 1-2).

**Figure 1-1  To access transactional data in Baan E-ServiceRemote**

1. Engineer ID taken for accessing data belonging to a specific engineer
2. Data accessed from Baan EIP using E-Dashboard
3. XML of E-dashboard converted into ESR format
4. Converted XML sent to client
To download transactional data to the client computers, take the following steps:

1. Take engineer ID to access data that belongs to a specific engineer.
3. Convert the XML of E-Dashboard to the ESR format.
4. Send converted XML to client.

**E-ServiceRemote - Downloading transactional data**

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1. **Incoming data does not overwrite local data, except for Material Costs**

*Figure 1-2 To download transactional data in E-Service Remote*

If you download transactional data, incoming data does not overwrite local data, with the exception of material costs.

The master data, which contains, for example, service items, is not downloaded onto the client in the same way. You must first download master data onto an MS SQL database on the Web server called E-Service Remote. E-Service Remote data is downloaded to client computers in the form of .mdb (Microsoft Access) files. The data is downloaded in this way for the following reasons:

- To improve performance.
- To provide E-Service Remote with additional Internet-application-specific data that is not stored in BaanERP.
- To decrease the load on the BaanERP computer.
  
  The load from the Internet can be heavy and unpredictable. Preferably, this load will not influence the load on the BaanERP computer.

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To have a single point of data entry and data consistency, you must have data synchronization technology that can synchronize the data that is stored in:

- E-Service Remote database on the Web server with the BaanERP database.
- E-Service Remote database on the Web server with a database stored on the client machine.

Master data synchronization takes place in the following four steps, which are explained in greater detail in later sections:

2. Transfer the data from the E-Service Remote database for clients to download.
To transfer master data from the BaanERP database to the E-Service Remote database on the Web server, the Synchronization system uses the BaanERP database as a starting point. The BaanERP system provides flat (ASCII) files. In the BaanERP system, exchange schemes are used to take the ASCII flat files from the BaanERP database. Baan E-Service Remote provides a number of DTS packages to import the flat files into the E-Service Remote database. The following illustration (see Figure 1-3) shows the process to transfer the master data from BaanERP to the E-Service Remote databases.

**E-Service Remote Architecture - Retrieving Master Data using Exchange**

![Diagram](image)

*Figure 1-3 To use Exchange to retrieve master data in the E-Service Remote Architecture*

To transfer the data from E-Service Remote database for clients to download, the E-Service Remote application assumes that the field service engineers work only for a particular service center. This assumption helps to restrict the amount of master data that you must download onto the client computers. On the Web server, .mdb files are generated for each service center and for each BaanERP company number. Service engineers download these .mdb files based on the service center to which they belong.
Generation of .mdb files is performed based on the CreateMasterData application, which is a Win32 software (see Figure 1-4).

Figure 1-4  E-ServiceRemote - Access database generation.

- ClientDatabase.mdb is a template of master database used in client systems
- CreateMasterData.exe creates .mdb and self-exploding zip files

1. DTS package ‘dumps’ data from ESR database into ClientDatabase.mdb
2. CreateMasterData.exe makes copies of ClientDatabase.mdb per service center, for each BaanERP company. .mdb converted to self-exploding zip files
- Configurations, Objects & Addresses tables ‘populated’ based on service center
- .mdb files and self-exploding zip files are named as - servicecenter.mdb

The following steps describe the procedure to generate .mdb files:
1. ClientDatabase.mdb is a template of master database used in client systems.
2. CreateMasterData.exe creates .mdb and self-exploding zip files.
3. Configurations, Objects, and Addresses tables are populated based on service center.
4. .mdb files and self-exploding zip files are named as servicecenter.mdb.
5. DTS package dumps data from ESR database into ClientDatabase.mdb.
6. Create Masterdata.exe makes copies of Clientdatabase.mdb for each service center and for each BaanERP company. The .mdb files are converted to self-exploding zip files.
The field service engineers download the respective self-explooding zip files with the E-Service Remote Web page (see Figure 1-5).

**Figure 1-5  To download access database in E-Service Remote**
To synchronize the E-Service Remote database and the BaanERP database

Data present in the E-Service Remote database must be synchronized with the data available in the BaanERP database. You can achieve this synchronization using the Synchronize Master Data software, which is a Win32 software that can run as a scheduled process with Windows NT Scheduler. The following illustration (see Figure 1-6) illustrates the architecture of the Synchronization solution.

Figure 1-6 To synchronize the E-Service Remote database and the BaanERP database

1. XML files contains the changes in Master data per service center
2. E-ServiceRemote database contains changes in BaanERP database

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To synchronize the E-Service Remote database and the client database

The client database (.mdb file) is synchronized with E-Service Remote database using the .XML files generated by MasterData-Synchronization. If the service engineers log on to the Web server, the required .XML file is automatically downloaded on to the client and the local database is synchronized (see Figure 1-7).

1. Service Engineer ID used to select appropriate XML file on web server
2. .XML file sent to client
3. Access database updated with data present in .XML file

*Figure 1-7 To synchronize the client and the ESR database in E-Service Remote*

To synchronize the client and the ESR database, E-Service Remote uses the following steps:

1. Uses service engineer ID, to select the appropriate .XML file on Web server.
2. .XML file is sent to the client.
3. Access database is updated with data present in .XML file.
The following entities in the E-Service Remote database are synchronized with BaanERP database:

- Addresses.
- Contacts.
- Units.
- Warehouses.
- Reasons.
- Cost components.
- Priorities.
- Objects.
- Configurations.
- Problems.
- Solutions.
- Tasks.
- Hourly labor types.
- Service types.
- Service centers.
- Service areas.
- Service kits.
- Service employees.
- Service cars.
- User defaults.
- Service item data.
- Reference activities.
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2 Create master data files

After you the master data is onto the E-Service Remote database from the BaanERP database, .mdb files must be created. These .mdb files must be downloaded by the service engineers onto their client system.

The .mdb files can be created with the Create Master Data application, located on the Web server at Directory, which is where the /Baan E-ServiceRemote/CreateMasterData directory is installed.

Create Master Data uses an Access Database template file called CreateDatabase.mdb. This database file contains the following tables, which service engineers can access:

- Addresses.
- Configurations.
- Contacts.
- Cost components.
- Hourly labor type.
- Objects.
- Priorities.
- Problems.
- Reasons.
- Reference activities.
- Service areas.
- Service cars.
- Service centers.
- Service items.
- Service kits.
- Service types.
- Solutions.
- Tasks.
- Units.
- Warehouses.
To generate the .mdb files, take the following steps:

1. Execute the EE_CreateMasterData DTS package on the Web server (see Figure 2-1).

The DTS package populates the CreateDatabase.mdb tables with data present in the E-Service Remote database (see Figure 2-2).

![Figure 2-1 EE_Create Master Data package](image1)

![Figure 2-2 To execute a package](image2)
2 Run the CreateMasterData.exe software, which you can find in the `<directory in which product was installed>/Baan E-Service Remote/CreateMasterData` directory.

The software then carries out the following tasks:

- Populates the Addresses, Configurations, and Objects tables with service center data, for each service center and for each BaanERP company.
- Creates a .mdb file for each service center and BaanERP company. The following figure (see Figure 2-3) shows CreateMasterData in use.

![CreateMasterData in use](image)

**Figure 2-3** CreateMasterData in use

If you must recreate .mdb file, select the **Re-Create Master Data** check box (see Figure 2-3).
ESR MasterDataGen.exe works in the following way:

1. Determines the number of BaanERP company numbers.
2. Determines number of service centers for each company.
3. Creates the folder MasterData in C:\inetpub\wwwroot or the location in which the Web root is present.
4. Creates one folder for each BaanERP company in the MasterData folder, based on information in Step 2 of the current procedure.
5. Creates one folder for each service center and BaanERP company, based on information in Step 2 of the current procedure.
6. Makes a copy of template.mdb from Step 1 of the current procedure for each service center. The name of the copied database file is equal to the name of the service center.
7. Populates the Addresses, Configurations, and Objects tables, based on service center and BaanERP company.
8. Makes a self-exploding .zip file of the .mdb file, with the pkzip.exe software available in the following directory: <Directory in which product was installed> \Baan E-ServiceRemote\CreateMasterData.
3 Synchronize master data

After the service engineers download the self-explooding zip file onto their client system and extract the access database from zip file, the database must constantly updated to ensure that the database reflects the corresponding changes in the BaanERP database. Changes in BaanERP database requirement is ensured by SynchronizeMasterData software, which is located on the Web server in the following database:

```text
<Directory in which product was installed>/Baan E-Service Remote/
SynchronizeMasterData directory.
```

Synchronization takes place in two steps:

2. Synchronization of E-Service Remote database and service engineer’s Access database in the service engineer’s client system.

**Synchronization of the BaanERP database and the E-Service Remote database**

To synchronize, you must maintain the relevant information in the BaanERP system. To maintain the information, take the following steps:

1. Start BaanERP.
2. Double-click the **BaanERP Tools** icon.
3. Double-click the **Database Definitions and Directories** icon.
4. Double-click the **Create Export Programs** icon. The Create Export Programs (tuxch0228m000) session starts. In this session, you must create a record for each table in the E-Service Remote database that you want to synchronize with the BaanERP database.
The following list provides a list of the tables of the E-Service Remote database that are synchronized:

- Addresses (ttccom140).
- Configuration (ttscfg220).
- Contacts (ttccom130).
- Cost components (ttcmcs048).
- Hourly labor types (ttsmdm025).
- Objects (ttscfg200).
- Priorities (ttcmcs070).
- Problems (ttscilm330).
- Reasons (ttcmcs005).
- References activities (ttsspc100).
- Service areas (ttsmdm015).
- Service car (ttsmdm145).
- Service centers (ttsmdm150).
- Service items (ttsmdm200).
- Service kits (ttsmdm110).
- Service types (ttsmdm005).
- Solutions (ttscilm335).
- Tasks (ttsmdm015).
- Units (ttcmcs001).
- Warehouses (ttcmcs003).

In the Create Export Programs (tuxch0228m000) session, you must maintain the information as illustrated in the following figure (see Figure 3-1) for the Addresses (ttccom140) table.

![Figure 3-1: Tables by Database (ttaad4111m000), to maintain the Addresses (ttccom140) table](image)

**NOTE**

To synchronize, you must select the check box in the Audit On column for each table selection.
If any of the previous master data tables undergoes changes, double-click the file SynchronizeMasterData.exe. The following dialog box appears (see Figure 3-2).

![Figure 3-2 To synchronize master data in Baan E-Service Remote](image)

**NOTE**

This software does not update the .mdb files generated by CreateMasterData. The software only updates the E-Service Remote database. Therefore, after the Baan E-Service database undergoes changes, if a service engineer must download a .mdb file again, you must run the CreateMasterData file.