

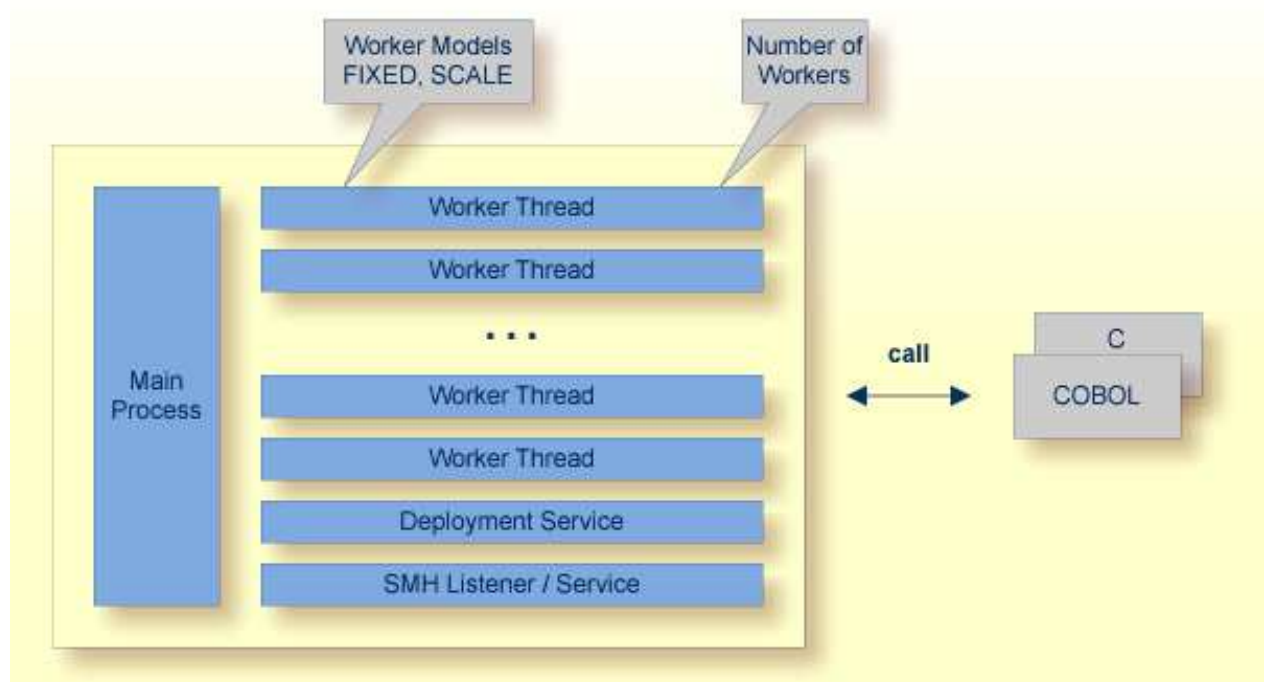
Inside the RPC Server

The EntireX BS2000/OSD Batch RPC Server allows standard RPC clients to communicate with RPC servers on the operating system BS2000/OSD. It supports the programming languages COBOL and C.

This chapter covers the following topics:

- Worker Models
- Inbuilt Services
- Usage of Server Mapping Files

Worker Models



RPC requests are worked off inside the RPC server in worker threads, which are controlled by a main thread. Every RPC request occupies during its processing a worker thread. If you are using RPC conversations, each RPC conversation requires its own thread during the lifetime of the conversation. The BS2000/OSD Batch RPC Server provides two worker models:

- **FIXED**
The *fixed* model creates a fixed number of worker threads. The number of worker threads does not increase or decrease during the lifetime of an RPC server instance.
- **SCALE**
The *scale* model creates worker threads depending on the incoming load of RPC requests.

A maximum number (thru value of the `workermodel` parameter) of worker threads created can be set to restrict the system load. The minimum number (from value of the `workermodel` parameter), allows you to define a certain number of threads - not used by the currently executing RPC request - to wait for new RPC client requests to process. In this way the RPC server is ready to handle many RPC client requests arriving at the same time.

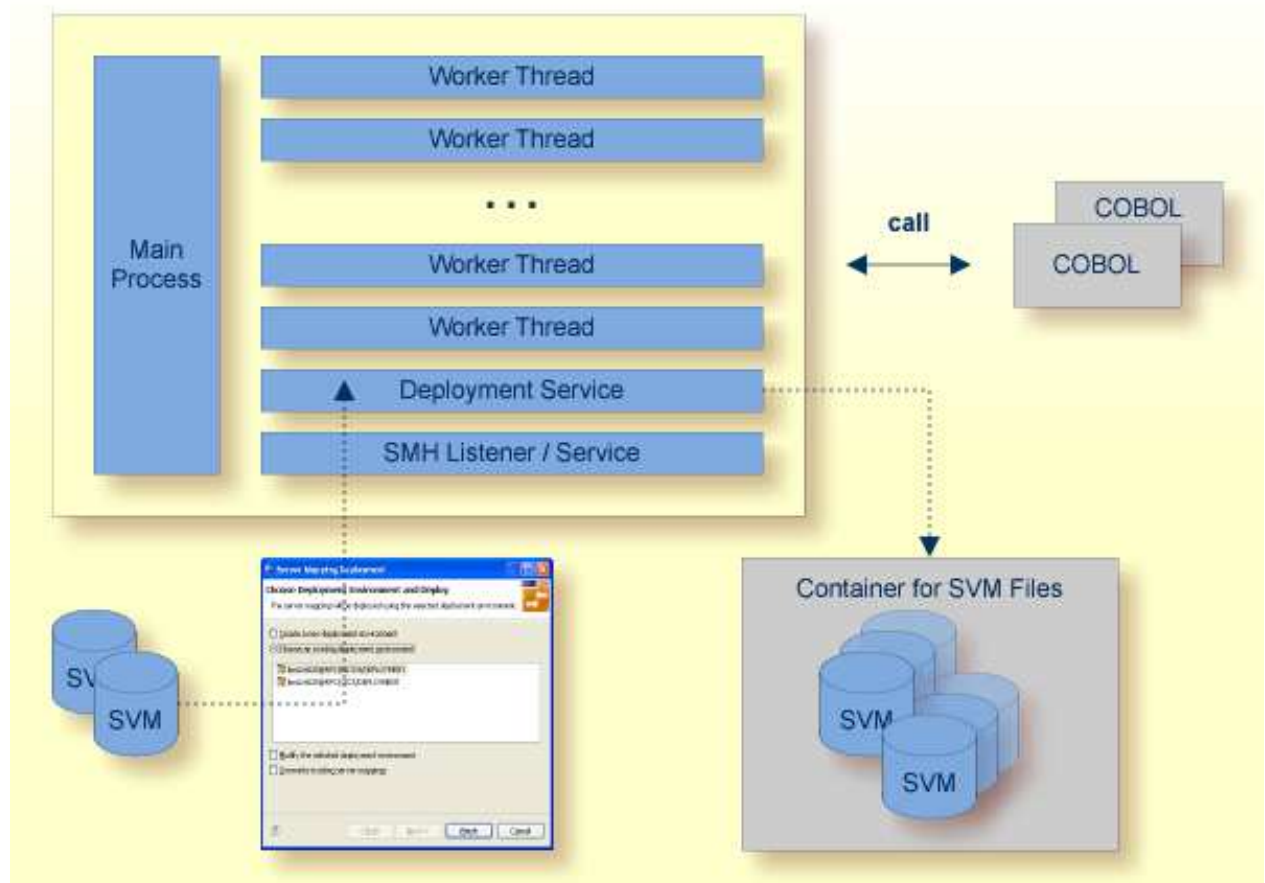
Inbuilt Services

BS2000/OSD Batch RPC Server provides the following services for ease-of-use:

- Deployment Service
- Extractor Service
- SMH Listener Service

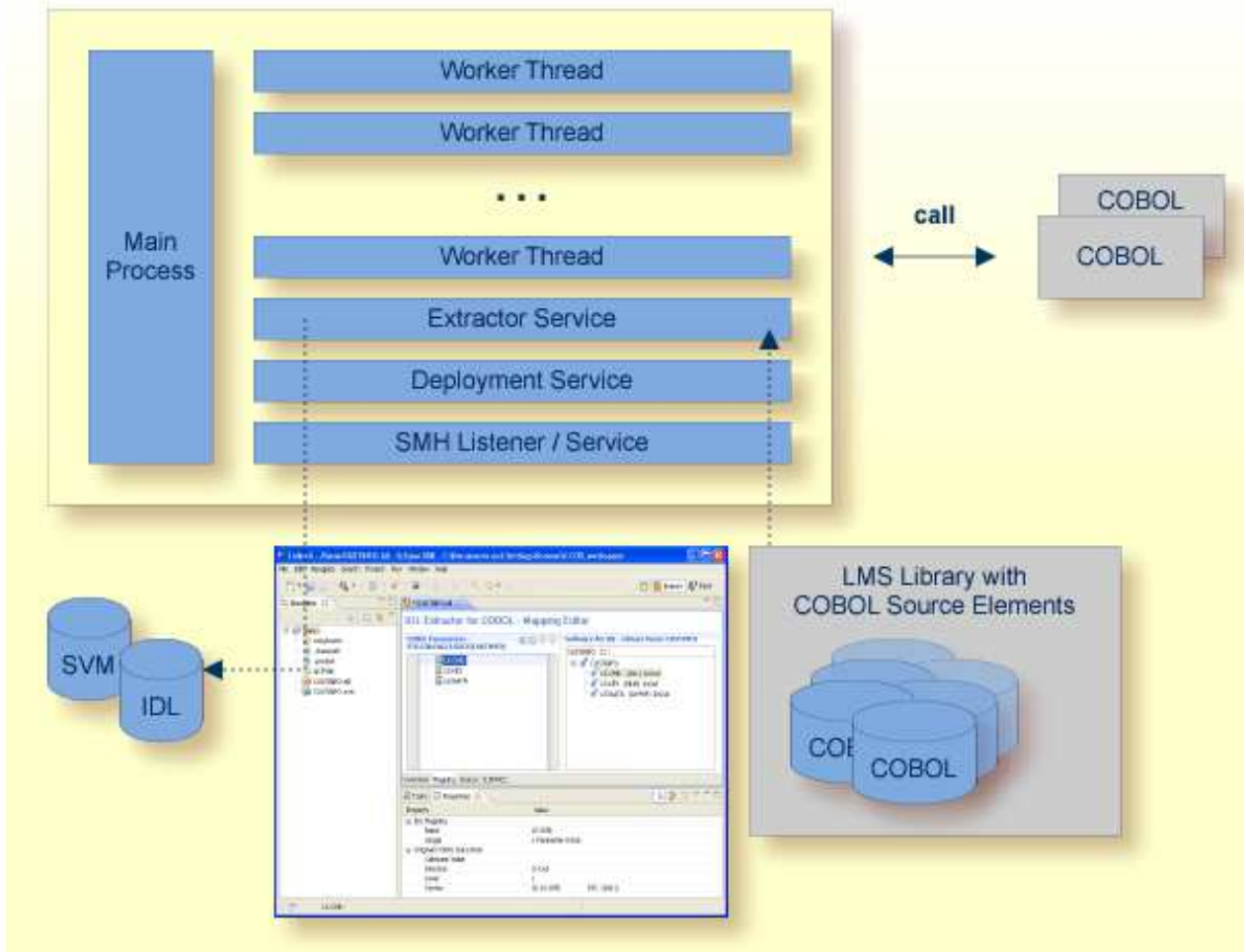
Deployment Service

The Deployment Service allows you to deploy server-side mapping files (EntireX Workbench files with extension `.svm`) interactively using the *Server Mapping Deployment Wizard*. On the RPC server side, the server-side mapping files are stored in a server-side mapping container (ISAM file). See *Server-side Mapping Files in the RPC Server* and *Deployment Service* for configuration information.



Extractor Service

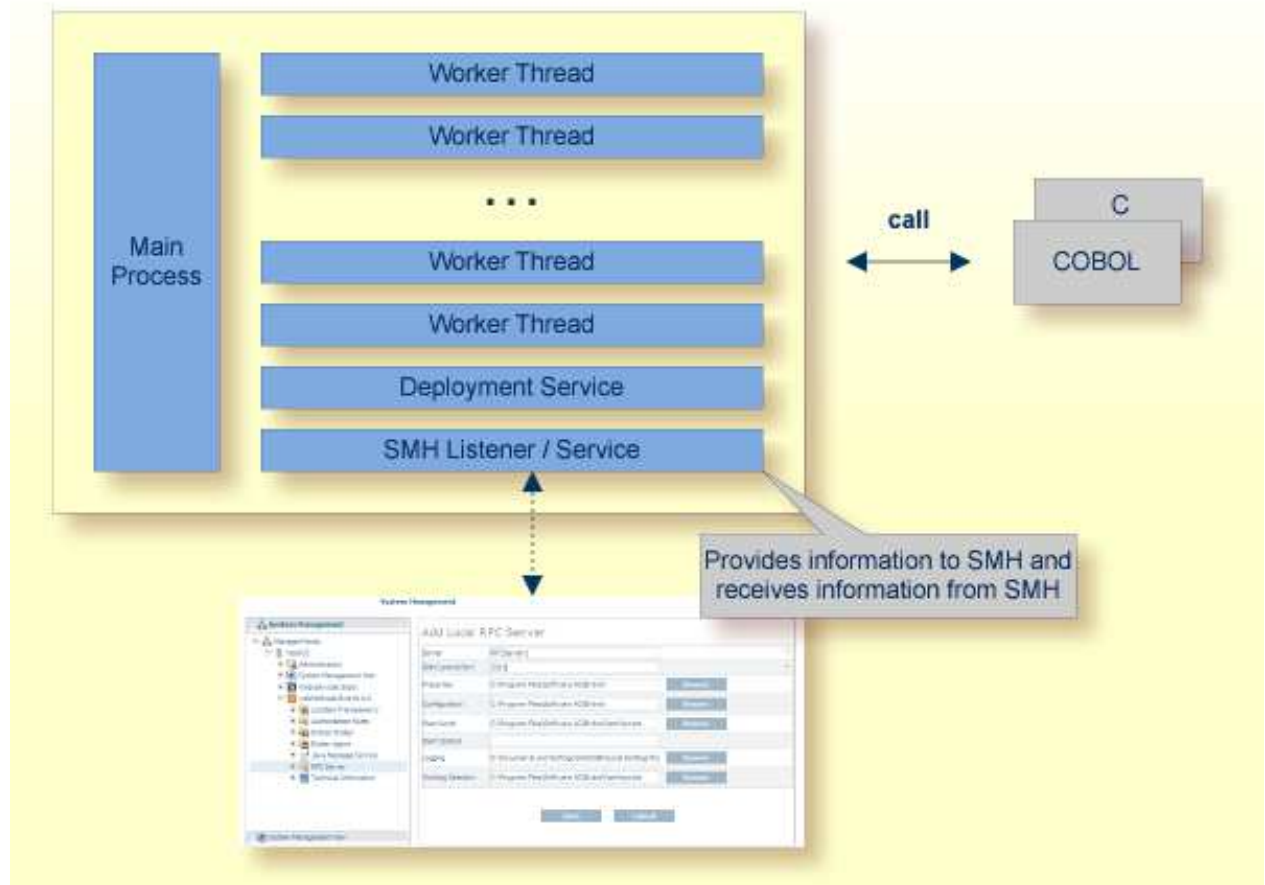
The Extractor Service is a prerequisite for remote extractions with the *IDL Extractor for COBOL* and *IDL Extractor for PL/I*. See *Extractor Service* for more information.



SMH Listener Service

With the SMH Listener Service you use the System Management Hub to monitor the RPC server. See *Administering the EntireX RPC Servers using System Management Hub* under UNIX | Windows.

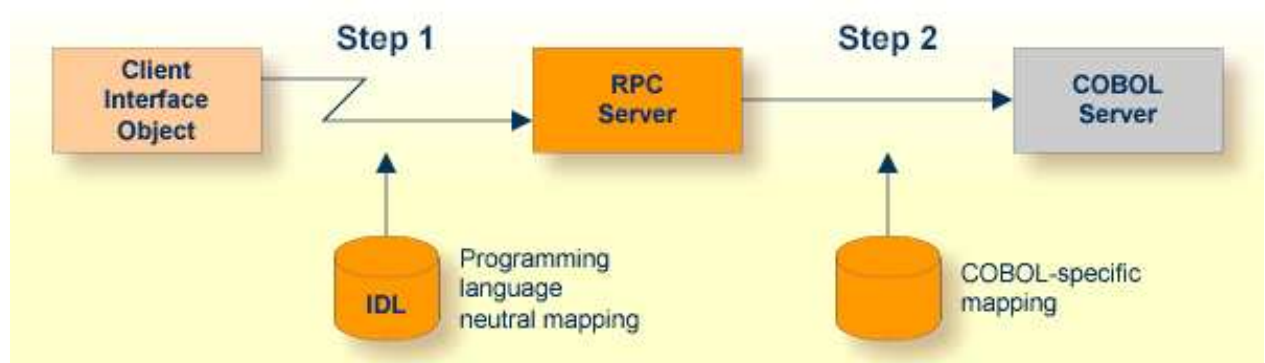
The SMH Service is switched on if the parameter `smhport` is set. See parameter `smhport` under *Configuring the RPC Server*.



Usage of Server Mapping Files

There are many situations where the Batch RPC Server requires a server mapping file to correctly support special COBOL syntax such as REDEFINES, SIGN LEADING and OCCURS DEPENDING ON clauses, LEVEL-88 fields, etc.

Server mapping files contain COBOL-specific mapping information that is not included in the IDL file, but is needed to successfully call the COBOL server program.



The RPC server marshals the data in a two-step process: the RPC request coming from the RPC client (Step 1) is completed with COBOL-specific mapping information taken from the server mapping file (Step 2). In this way the COBOL server can be called as expected.

The server mapping files are retrieved as a result of the *IDL Extractor for COBOL* extraction process and the *COBOL Wrapper* if a COBOL server is generated. See *When is a Server Mapping File Required?*.

There are *server-side* mapping files (*EntireX Workbench* files with extension *.svm*) and *client-side* mapping files (*Workbench* files with extension *.cvm*). See *Server Mapping Files for COBOL* and *How to Set the Type of Server Mapping Files*.

If you are using server-side mapping files, you need to customize the server-side mapping container with parameter *svm*. See *Configuring the RPC Server*.