Server-side Mapping Files

Server mapping enables the RPC server to correctly support special COBOL syntax such as REDEFINEs, SIGN LEADING and OCCURS DEPENDING ON clauses, LEVEL-88 fields, etc. If one of these elements is used, the IDL Extractor for COBOL automatically extracts a server mapping file in addition to the IDL file (interface definition language). Also, the COBOL Wrapper may generate a server mapping file for RPC server generation. The server mapping is used at runtime to marshal and unmarshal the RPC data stream. There are client-side mapping files (EntireX Workbench files with extension .cvm) and server-side mapping files (Workbench files with extension .svm). If you have not used server-side mapping, we recommend you use client-side mapping. See *Server Mapping Files for COBOL* in the EntireX Workbench documentation.

This chapter covers the following topics:

- Server-side Mapping Files in the RPC Server

- Deploying Server-side Mapping Files to the RPC Server

- Undeploying Server-side Mapping Files to the RPC Server

- Change Management of Server-side Mapping Files

- List Deployed Server-side Mapping Files

- Check if a Server-side Mapping File Revision has been Deployed

- Access Control: Secure Server Mapping File Deployment

- Is There a Way to Smoothly Introduce Server-side Mapping Files?

See also *Source Control of Server Mapping Files | Comparing Server Mapping Files | When is a Server Mapping File Required? | Migrating Server Mapping Files* in the EntireX Workbench documentation.

Server-side Mapping Files in the RPC Server

Under BS2000/OSD, server-side mapping corresponds to lines of EntireX Workbench files with extension .svm. See *Server Mapping Files for COBOL*. The mapping information is stored as records within one ISAM file, the server-side mapping container. This container contains all server-side mapping entries from all EntireX Workbench files with extension .svm. The unique key of the ISAM file file consists of the first 255 bytes of the record: for the type (1 byte), for the IDL library (127 bytes) and for the IDL program (127 bytes).

If *one* server requires a server-side mapping file, you need to provide this to the RPC server:

- Development environments: to deploy new server-side mapping files, see *Deploying Server-side Mapping Files to the RPC Server*.

- Production environments: provide a server-side mapping container (ISAM file) containing all required server-side mapping files to the RPC server. See configuration parameter svm.

If *no* server requires server-side mapping, you can execute the RPC server without server mapping files:

- Development environments: you can disable the deployment service. See *Disabling the Deployment Service*.

- Production environments: there is no need to provide a server-side mapping container (ISAM file) to the RPC server. See configuration parameter `svm`.

Deploying Server-side Mapping Files to the RPC Server

Deploy a server-side mapping file (Workbench file with extension .svm) with the Server Mapping Deployment Wizard. See *Server Mapping Files for COBOL* in the EntireX Workbench documentation.

≫   **To deploy a server-side mapping file with the Server Mapping Deployment Wizard**

1. Make sure the RPC server is active and that the Deployment Service of the RPC server is properly configured. See *Deployment Service*.

2. From the context menu of your IDL file, choose **COBOL > Deploy/Synchronize Server Mapping** COBOL > Deploy/Synchronize Server Mapping and call the Deployment Wizard. See *Server Mapping Deployment Wizard* in the EntireX Workbench documentation.

Undeploying Server-side Mapping Files to the RPC Server

Use the Server Mapping Deployment Wizard to undeploy a server-side mapping file (Workbench file with extension .svm). See *Server Mapping Files for COBOL.*

≫   **To undeploy a server-side mapping file with the Server Mapping Deployment Wizard**

1. Make sure your RPC server is active and that the Deployment Service of the RPC server is properly configured. See *Deployment Service*.

2. Make sure your IDL file is within an EntireX Workbench directory (folder) without the related server-side mapping file (.svm).

3. From the context-menu of your IDL file, choose **COBOL > Deploy/Synchronize Server Mapping** and call the Server Mapping Deployment Wizard. See *Server Mapping Deployment Wizard* in the EntireX Workbench documentation. Because there is no related server-side mapping file in the Workbench, all server mapping information related to the IDL file in the RPC server will be removed.

Change Management of Server-side Mapping Files

Under BS2000/OSD, change management for an ISAM file (server-side mapping container, see *Server-side Mapping Files in the RPC Server*) is similar to change management for an ordinary file. All updates to the ISAM file done after a backup must be kept.

All EntireX Workbench server-side mapping files (.svm) added since the last backup should be available. See *Server Mapping Files for COBOL* in the EntireX Workbench documentation.

List Deployed Server-side Mapping Files

Use the command `SHOW-FILE` to list the contents of the server-side mapping container. See *Server-side Mapping Files in the RPC Server*.

```
SHOW-FILE <server-mapping-file>
```

where `<server-mapping-file>` is the server-side mapping container (ISAM file) containing all server-side mapping information.

Check if a Server-side Mapping File Revision has been Deployed

Server-side mapping records in the server-side mapping container correspond to lines of EntireX Workbench files with extension .svm. See *Server Mapping Files for COBOL* in the EntireX Workbench documentation. The records contain a creation timestamp at offset 276 (decimal) in the format *YYYYMMDDHHIISST*. Precision is 1/10 of a second. The creation timestamp can be checked.

The timestamp can be found on the same offset in the records in the server-side mapping container (ISAM file). See *Server-side Mapping Files in the RPC Server*.

Access Control: Secure Server Mapping File Deployment

For deployment with the *Server Mapping Deployment Wizard*, use EntireX Security if the broker is running on platforms z/OS, UNIX , Windows or z/VSE. See *Enabling the Deployment Service*.

Is There a Way to Smoothly Introduce Server-side Mapping Files?

All EntireX RPC servers can be executed without server-side mapping files. See *Server-side Mapping Files in the RPC Server*. There is no need to install the server-side mapping container if the following conditions are met:

- You do not use features that require server mapping; see *When is a Server Mapping File Required?*

- Server-side type of COBOL mapping is switched on in the EntireX Workbench. If you have not used server-side mapping, we recommend you use client-side mapping. See *Server Mapping Files for COBOL*.

You can also call COBOL servers generated or extracted with previous versions of EntireX mixed with a COBOL server that requires server-side mapping. All EntireX RPC servers are backward compatible.