Server-side Mapping Files

Server mapping enables the RPC server to correctly support special COBOL syntax such as `REDEFINE`s, `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

For Micro Focus RPC Servers under UNIX or Windows, server-side mapping corresponds to lines of EntireX Workbench files with extension .svm. See *Server Mapping Files for COBOL*. The server-side mapping is stored as directories (folders) and operating system files. For each IDL library, a directory is created by the deployment service during deployment and each server mapping related to an IDL program is stored as an operating system file within this directory containing the server mapping. The anchor of the server-side mapping container (directory or folder) is configured by the server mapping file subparameter "`path`" of parameter "`svm`". See *Configuring the RPC Server*. For example, deploying the file *example.svm* from the EntireX directory *examples/RPC/basic/example* results in folder EXAMPLE and operating system files for the IDL programs `CALC` and `SQUARE`:

```
../EXAMPLE
/CALC.svm
/SQUARE.svm
```

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 (directory or folder) 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 a server-side mapping container (directory or folder).

- 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 (directory or folder) 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 UNIX and Windows, change management for a directory or folder (server-side mapping container, see *Server-side Mapping Files in the RPC Server*) is similar to change management within ordinary operating system directories (folders). All updates to the directory or folder 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 Windows Explorer (for Windows) or the `ls` command (for UNIX) to list the contents of the server-side mapping container (directory or folder). See *Server-side Mapping Files in the RPC Server*.

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

Server-side mapping files 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 files 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 server-side mapping files stored in the server-side mapping container (directory or folder). 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.