

OS/400 Runtime Component

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Introduction

1.1. Related Products

- MetaStore Manager (and the corresponding batch component MSBSTORE)
- MetaMap Manager (and the corresponding batch component MSBMAP)
- Generator Manager (and the corresponding batch component MSBGEN)

1.2. Terminology

MDL	MetaSuite Definition Language
MXL	MetaSuite Export Language
MGL	MetaSuite Generated Language
MRL	MetaSuite Run Language
CBL	COBOL source
COB	COBOL source
SQB	SQL COBOL source
ECO	Embedded SQL COBOL source
<Ins>	MetaSuite installation folder on the client side

1.3. System Requirements

CPU	Pentium Processor or higher
System RAM	Minimum of 96 MB
Hard disk space	Minimum 300 MB of free disk space for storage of MetaSuite software and .NET Framework.

Operating System	<ul style="list-style-type: none">• Windows Vista• Windows Seven• Windows XP with Service Pack 3
Software	<ul style="list-style-type: none">• Microsoft .NET Framework 2.0 (already included in Windows Vista)• File transfer program (e.g. PC Support)• MT9750 terminal emulator

1.4. Pre-installation Requirements

Before installing the runtime component, you must:

1. Install MetaSuite and select *IBM COBOL on OS/400* as Generator environment.

For more detailed information, refer to the *Installation and Setup Guide*.

2. Create the MetaSuite Generator Dictionary for IBM COBOL on OS/400.

For more detailed information, refer to the *Generator Manager User Guide*.

About This Manual

This guide describes how to install the MetaSuite OS/400 runtime component. More specifically, it describes the installation of the following MetaSuite components:

- Base product
- MetaSuite Database Interfaces

The instructions for these components refer to additional information found in separate documents. Be sure to have those documents available during the installation.

2.1. Prerequisites

Product installers are expected to be familiar with their host operating systems and software installation processes.

2.2. Related Publications

The MetaSuite User and Reference Guides describe the different MetaSuite components and provide examples for using MetaSuite. Those guides should be available for reference during the installation and test procedures described here.

The following table gives an overview of the complete MetaSuite documentation set.

Release Information	Release Notes 8.1.3
Installation Guides	<ul style="list-style-type: none"> • BS2000/OSD Runtime Component • DOS/VSE Runtime Component • Fujitsu Windows Runtime Component • MicroFocus Windows Runtime Component • MicroFocus UNIX Runtime Component • OS/390 and Z/OS Runtime Component • OS/400 Runtime Component • VisualAge Windows Runtime Component • VisualAge UNIX Runtime Component • VMS Runtime Component
User Guides	<ul style="list-style-type: none"> • INI Manager User Guide • Installation and Setup Guide • Introduction Guide • MetaStore Manager User Guide • MetaMap Manager User Guide • Generator Manager User Guide

Technical Guides	<ul style="list-style-type: none"> • ADABAS File Access Guide • IDMS File Access Guide • IMS DLI File Access Guide • RDBMS File Access Guide • XML File Access Guide • Runtime Modules • User-defined Functions User Guide
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In addition, you may want to refer to the related IBM manuals for your operating system, which explain how to code JCL and how to interpret IBM system messages and codes.

If you are unfamiliar with MetaSuite, the following technical description provides you with a brief overview.

The MetaSuite System	MetaSuite is designed for data retrieval, extraction, conversion and reporting. It includes a workstation-based graphical user interface and a mainframe runtime component.
MetaSuite Database Interfaces	MetaSuite can access data from a number of database management systems, using the same commands, program structure and retrieval techniques used for non-database files. Each database interface is available as an optional enhancement to the base product.
MetaMap Manager	MetaMap Manager is the MetaSuite tool used to define models. Such models are intuitively built by describing overall program specifications, input file definitions (data and process) and target file definitions (data and process).
MetaStore Manager	MetaStore Manager is a tool that provides metadata maintenance and documentation services.
Generator Manager	The Generator Manager is the system administration tool. All kinds of basic functionalities and customization possibilities are supported by this tool.

MetaSuite Generator Runtime Installation

3.1. Runtime Components

The x:\installdirectory\GENOS400\system directory contains the following files:

COBOL sources: MS*813.cbl

3.2. OS400 Environment

Create a new library MSTEST using CRTLIB

Create a new library MS400 using CRTLIB

Create following source physical files in library MS400 using CRTSRCPF:

- MSCBL to contain MetaSuite generated user applications
- MSCLP to contain user application run scripts
- QLBSRC to contain the MetaSuite COBOL runtime module source

3.3. Install Runtime

Use a File Transfer Program (FTP) to copy the MetaSuite runtime source code (all the .cbl files) from the MetaSuite\GenOS400\SYSTEM folder into the MetaSuite source library.

Use CRTPF to create these physical sequential files with the required record length attribute and define a single element with a size equal to the specified record length (RL).

Compile and Link Runtime

Compile MSRUN Sample CLP

```
!  CHGCURLIB MS400
!  WRKMBRPDM MSCLP
!  Change the member type to CLP for:
!      MSRUN ! Option 14 to compile:
!      MSRUN
!  WRKSPLF to check compile listing
```

Compile COBOL Runtime Source

```
! CHGCURLIB MS400  
  WRKMBRPDM QLBLSRC  
! Change the member type to CBL
```

Note: If your COBOL compiler does not support Unicode (i.e., the Unicode functions "display-of" and "national-of" with the option "second argument" to provide a code page (for example 1208 to do the conversion to or from UTF-8)), some runtime programs can not be compiled.

Compile a MetaSuite Generator Program

Note: The scripts used in the following sections are for documentary purposes only.

4.1. Compilation

Transfer the user application COBOL source from X:\installdirectory\GENOS400\MGL\MXL-name.MGL to MS400/MS400/MS400\MSCBL(MXL-name) using your favorite file transfer software.

```
! CHGCURLIB MS400
! WRKMBRPDM MSCBL
! set member type to CBL for MXL-name
! Option 14 to compile MXL-name
```

4.2. Pre-compilation

When your MetaSuite program accesses a RDBMS SourceFile, the generated program must be pre-compiled before compilation. Pre-compilation is dependent of the type of RDBMS that will be accessed.

DB2/400

```
! CHGCURLIB MS400
! WRKMBRPDM MSCBL
! Change the member type of MXL-name to SQLCBL
! Option 14 to compile MXL-name and use F4 to prompt for compile options.
! Use the following options of CRTSQLCBL:
    Pre-compiler:
        *APOSTSQL
        *SQL
! F10 for Additional parameters
    Date format: *ISO
    Time format: *ISO
! Submit to compile
```

Run a MetaSuite Generator Program

When a MetaSuite Generator program is run, there is a template run script generated as well, which is stored in `x:\installdirectory\GENOS400\MRL\MXL-name.MRL`. You can customize the generation of the template run script by changing the code tables, which are used for the template run script.

Please refer to *Generator Manager User Guide* for more information on how the code tables for the template run scripts are built.

Note: The scripts used in the following sections are for documentary purposes only.

5.1. Example

The following is an example run script, which is generated for EX0.MXL.

```
/* OS400 CLP For EX0-0001 */
PGM
/* del EX0.lst */
/* del EX0.log */
/* del EX0.d01 */
OVRDBF FILE(PPTF01) TOFILE(**LIB**/employee-master)
OVRDBF FILE(PPTTD01) TOFILE(**LIB**/EX0.D01)
OVRDBF FILE (PPTIPT)
OVRDBF FILE (PPTLID)
OVRDBF FILE(PPTLOG) TOFILE(**LIB**/EX0.LOG)
CRTPRTF FILE(**LIB**/EX0.LST)
OVRPRTF FILE(PPTLST) TOFILE(**LIB**/EX0.LST) +
        USRDTA(EX0.LST) SPLFNAME(EX0.LST) +
        PAGESIZE(66 132) CTLCHAR(*FCFC)
CALL PGM(**LIB**/EX0)
WRKF FILE(**LIB**/*ALL)
ENDPGM
```