

# BS2000/OSD 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.

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

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## 1.4. Pre-installation Requirements

Before installing the runtime component, you must:

1. Install MetaSuite and select *B2000/OSD* as Generator environment.

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

2. Create the MetaSuite Generator Dictionary for B2000/OSD.

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

# About This Manual

This guide describes how to install the MetaSuite B2000/OSD 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"> <li>• BS2000/OSD Runtime Component</li> <li>• DOS/VSE Runtime Component</li> <li>• Fujitsu Windows Runtime Component</li> <li>• MicroFocus Windows Runtime Component</li> <li>• MicroFocus UNIX Runtime Component</li> <li>• OS/390 and Z/OS Runtime Component</li> <li>• OS/400 Runtime Component</li> <li>• VisualAge Windows Runtime Component</li> <li>• VisualAge UNIX Runtime Component</li> <li>• VMS Runtime Component</li> </ul>
User Guides	<ul style="list-style-type: none"> <li>• INI Manager User Guide</li> <li>• Installation and Setup Guide</li> <li>• Introduction Guide</li> <li>• MetaStore Manager User Guide</li> <li>• MetaMap Manager User Guide</li> <li>• Generator Manager User Guide</li> </ul>

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Technical Guides	<ul style="list-style-type: none"> <li>• ADABAS File Access Guide</li> <li>• IDMS File Access Guide</li> <li>• IMS DLI File Access Guide</li> <li>• RDBMS File Access Guide</li> <li>• XML File Access Guide</li> <li>• Runtime Modules</li> <li>• User-defined Functions User Guide</li> </ul>
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If you are unfamiliar with MetaSuite, the following technical description provides you with a brief overview.

<b>The MetaSuite System</b>	MetaSuite is designed for data retrieval, extraction, conversion and reporting. It includes a workstation-based graphical user interface and a mainframe runtime component.
<b>MetaSuite Database Interfaces</b>	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.
<b>MetaMap Manager</b>	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).
<b>MetaStore Manager</b>	MetaStore Manager is a tool that provides metadata maintenance and documentation services.
<b>Generator Manager</b>	The Generator Manager is the system administration tool. All kinds of basic functionalities and customization possibilities are supported by this tool.

# CHAPTER 3

## Overview

The installation of MetaSuite consists of several stages, described briefly in this chapter.

Stage	Description
Stage 1 Completing the Pre-installation questionnaire	This questionnaire collects all information needed during the installation.
Stage 2 Building the runtime installation	Allocate all the necessary libraries. Copy members of the MetaSuite installation directories into the appropriate libraries.
Stage 3 Compiling and linking the runtime system	Compile and link the MetaSuite Runtime Components.

**Note:** *MetaSuite Runtime Components* operate under the restrictions imposed by data security systems and by database management systems to be accessed. When you install MetaSuite, be sure that the intended users have access to the appropriate MetaSuite files and libraries.

# Stage 1 - Completing the Pre-installation Questionnaire

The information in this questionnaire is required for the MetaSuite installation jobs and the MetaSuite procedures.

After you complete the questionnaire, you replace this information into the MetaSuite installation jobs and the MetaSuite procedures.

In most cases, the symbolic markers that appear in the left column surrounded by asterisks (for example, **\*\*SYSLIB\*\***) are used in these installation text files. You may use any editor to substitute the symbolic markers with your values.

The following topics are discussed:

- [COBOL-85 Compiler Defaults](#) (page 6)
- [Linkage Default Parameters](#) (page 6)
- [Database Interface Values](#) (page 7)

## 4.1. COBOL-85 Compiler Defaults

Installation Parameter	Your Value	Description/Choices
COBOL Compiler Program	COBOL85	NAME of the COBOL-85 compiler program used to compile your MetaSuite application programs.
COBOL-85 Compiler Parameters	Please refer to the <i>SNI COBOL-85 User Guide</i>	

## 4.2. Linkage Default Parameters

Installation Parameter	Your Value	Description/Choices
Link Program	BINDER	NAME of the Linkage Program in use on your computer system.
Link Editor Parameters	Please refer to the <i>SNI BINDER or TSOSLNK User Guide</i>	



## 4.3. Database Interface Values

### SESAM Database Interface

Please refer to the SNI SESAM users guide for more information about the installation parameters.

### IDMS Database Interface

Installation Parameter	Your Value	Description/Choices
**IDMSLIB** Subroutine Load Library		NAME of the IDMS load library containing the IDMS database management routines (including IDMS, IDMSCANC and the "IDMSOPTI" module).
**SYSCTL** IDMS SYSCTL Name		MetaSuite programs can run in either local or central mode. If you want your programs to run in central mode but do not specify the name of an IDMSOPTI module, use this parameter to specify the file name of the SYSCTL file that provides central mode access.
IDMSOPTI Module Name		MODULE NAME. MetaSuite applications which access the IDMS database can either run in "local mode" (which means that the JCL for the database files must be provided in the MetaSuite job stream) or in "central mode" (which means that no database JCL is needed with the exception of SYSCTL, below). The way that your programs run may be controlled by the JCL or by a module called the IDMSOPTI module. This module is constructed by your IDMS system administrator, who determines its name. If you want to use the IDMSOPTI module to control the technique for accessing the database, then supply its name for this parameter.

# Stage 2 - Building the Runtime Installation Libraries

This stage indicates how to continue after having completed the questionnaire.

- [Installation Jobs](#) (page 8)
- [Generated MRL](#) (page 8)
- [Copy MetaSuite Runtime Sources](#) (page 9)

## 5.1. Installation Jobs

Following jobs require parameter substitution:

```
MKCOB.PRC  
COMPILE-BIND.JOB
```

The first job to adapt is the COMPILE-BIND job which compiles and binds the runtime modules in an LLM library. You can modify this job according to your own system standards, including module libraries and compiler/bind options.

If this job is successfully executed, everything is ready to compile and run the MGL COBOL programs under the B2000/OSD/OSD operating system. Adapt this job as well.

The compilation is done with the MKCOB procedure.

Please refer to [Appendix A - MetaSuite Library Contents](#) (page 11) for a description of the function of the jobs.

## 5.2. Generated MRL

When generating a MetaSuite model, a COBOL program as well as a template run-script is created, which is stored in `x:\installdirectory\GENB2000\OSD\MRL\MXL-name.mrl`. This script needs parameter substitution. In order to modify the MRL procedure, you will have to change the RLxxxx-tables in the MetaSuite Dictionary.

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

## 5.3. Copy MetaSuite Runtime Sources

Use a File Transfer Program (FTP) to copy the MetaSuite runtime source code (.cbl files) from the MetaSuite\GenBS200\SYSTEM folder into the MetaSuite source library on BS2000/OSD.

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**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.

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# Stage 3 - Compiling and Linking the Runtime System

This stage needs to perform a compile and link job:

The job compiles the MetaSuite runtime routines, places the resulting object modules into the MetaSuite Object Library and will link the Runtime modules into the MetaSuite Load Library.

## 6.1. Compile and Link Job

The runtime modules are provided in source format. See the MetaSuite Source Library Contents section in this Guide for an explanation of the functions of each of these modules.

The MetaSuite runtime sources copied during the previous stage, will be compiled.

### Job Steps Within COMPILE-BIND

Step	Programs Produced
MSCOB	This step will need an in-stream procedure to compile the runtime modules. Review this step with your System Programmer.
MSLNK	Link runtime modules. Review this step with your System Programmer.

# Appendix A - MetaSuite Library Contents

The following members are stored in the MetaSuite system libraries. The members are grouped in this appendix according to the general function they serve. Each member name is followed by a brief description of its specific function.

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

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## A.1. Job Library

This library consists of installation jobs.

Each job has to be tailored by the system installer during the installation of MetaSuite.

Member Name	Description
COMPILE-BIND	Compile, link runtime models

### COMPILE-BIND Job

All program files location in the MetaSuite\GENBS2000\SYSTEM folder must be compiled as follows:

```
/PROC N, (OBJLIB=**OBJLIB**, LOADLIB=**LOADLIB**), SUBDTA=&
/START-COBOL85-COMPILER SOURCE=MSXXX813.CBL, MODULE-LIBRARY=&OBJLIB
/ASSIGN-SYSDTA TO=*SYSCMD
/START-BINDER
START-LLM-CREATION INTERNAL-NAME=MSXXX813
INCLUDE-MODULES LIB=&OBJLIB, ELEMENT=MSXXXASC813
SAVE-LLM LIB=&LOADLIB, ELEMENT=MSXXX813, ENTRY-POINT=MSXXX813
END
/ASSIGN-SYSDTA TO=*PRIMARY
/ENDP
```

## A.2. Procedures Library

This library consists of prototype JCL procedures.

Member Name	Description
MKCOB	Make a COBOL executable

### MKCOB Job

```

/PROC N, (&SOURCE, OBJLIB=**OBJLIB**, LOADLIB=**LOADLIB**), SUBDTA=&
/ERASE *
/START-COBOL85-COMPILER SOURCE=&SOURCE..CBL, MODULE-LIBRARY=&OBJLIB
/ASSIGN-SYSDTA TO=*SYSCMD
/START-BINDER
START-LLM-CREATION INTERNAL-NAME=&SOURCE
INCLUDE-MODULES LIB=&OBJLIB, ELEMENT=&SOURCE
SAVE-LLM LIB=&LOADLIB, ELEMENT=&SOURCE
END
/ASSIGN-SYSDTA TO=*PRIMARY
/ENDP

```

## A.3. Source Library

This library includes the source code for runtime support modules of the MetaSuite system. These are supplied in the event that it becomes necessary to recompile the support modules due to changes in your environment (a new release of the COBOL compiler might require re-compilation).

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**Note:** More information about the MetaSuite Runtime Modules can be found in the *Runtime Modules* guide.

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