

VMS 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 *Digital/VMS* as Generator environment.
For more detailed information, refer to the *Installation and Setup Guide*.
2. Create the MetaSuite Generator Dictionary for Digital/VMS.
For more detailed information, refer to the *Generator Manager User Guide*.

About This Manual

This guide describes how to install the MetaSuite VMS 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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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

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

3.1. Runtime Components

The `x:\installdirectory\GENVMS\system` directory contains the following files:

COBOL sources:	MS*813.cbl	
C sources:	PPTF4X10.C	
	PPTF8X10.C	
Scripts:	mkrts813.com	(build runtime)
	Mkcob.com	(compile)
	Mkcobing.com	(pre- & compile)
	Mkcobrdb.com	(pre- & compile)
	Run.com	(example run script)
	Runing.com	(example run script)
	Runrdb.com	(example run script)

3.2. VMS Environment

Create a METASUIT account and create the following directories:

```
[USER]
[SYSTEM]
```

3.3. Install Runtime

Use your favorite data transfer mechanism to send the following components from the `x:\installdirectory\GENVMS\system` directory to the [SYSTEM] directory on the VMS platform:

Note: ??? replaces the 3 middle characters of the COBOL source files.

```
MS???813.cbl
Ppt???10.c
```

```
mkrts813.com  
mkcob.com  
mkcobing.com  
mkcobrdb.com  
run.com  
runing.com  
runrdb.com
```

Compile & Link Runtime

Following needs to be executed in the VMS environment to compile and link the runtime:

```
login to the METASUIT account  
set def [SYSTEM]  
@mkrts813.com
```

Following procedure will be executed:

Note: ??? replaces the 3 middle characters of the COBOL source files.

```
$COBOL/ANSI_FORMAT/STANDARD=85 MS???813
```

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

Following compilation scripts are transferred to your VMS environment, which will be used for (pre-) compilation of your generated MetaSuite programs:

```
Mkcob.com
Mkcobing.com
Mkcobrdb.com
```

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

4.1. Compilation

Transfer the `x:\installdirectory\GENVMS\MGL\MXL-name.mgl` to `[USER]MXL-name.mgl`

```
Set def [USER]
@mkcob.com MXL-name
```

Following procedure will be executed:

```
$COBOL/ANSI_FORMAT/LIST/STANDARD=85 'p1'.MGL
$LINK 'p1',-
MSCCX813,MSCIX813,MSDBX813,-
MSTDx813,MSTMx813, ...etc...
```

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.

CA/Ingres

Transfer the `x:\installdirectory\GENVMS\MGL\MXL-name.mgl` to `[USER] MXL-name.mgl`

```
Set def [USER]
@mkcobing.com MXL-name
```

Following procedure will be executed:

```
$ESQLCBL -a -lo 'p1'.MGL
$COBOL/ANSI_FORMAT/LIST/STANDARD=85 'p1'.COB
$LINK 'p1',-
MSCCX813,MSCIX813,MSDBX813,-
MSTDx813,MSTMx813, ...etc... -
SYS$LIBRARY:~/LIB
```

Oracle/RDB

Transfer the x:\installdirectory\GENVMS\MGL\MXL-name.mgl to [USER] MXL-name.mgl

```
Set def [USER]
@mkcobrdb.com MXL-name
```

Following procedure will be executed:

```
$DEFINE SQL$DATABASE Rdb-filename
$SQL$PRE60/COBOL/ANSI_FORMAT/SQLOPTION=(CONNECT)/LIST/STANDARD=85
'p1'.MGL
$LINK 'p1',-
MSCCX813,MSCIX813,MSDBX813,-
MSTDx813,MSTMx813, ...etc... -
      SYS$LIBRARY:SQL$USER60/LIB
```

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\GENVMS\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.

Transfer the `x:\installdirectory\GENVMS\MRL\MXL-name.mrl` to `[USER]MXL-name.mrl`

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.

```
$! VAX Runscript For ex0-0001
$DEL ex0.LOG
$DEL ex0.LST
$DEL ex0.d01
$DEFINE PPT$IPT
$DEFINE PPT$LID
$DEFINE PPT$F01 employee-master
$DEFINE PPT$LOG ex0.log
$DEFINE PPT$LST ex0.lst
$DEFINE PPT$TD01 ex0.d01
$RUN ex0.EXE
$!
```

RDBMS Run Considerations

Users can set only 1 runtime variable on the command for security reasons. The next example will set the password:

```
$RUN XXXXXXXX.exe SYS-DB-PASSWORD = 'password'
```

6.1. Oracle/RDB

Oracle/RDB users should supply the following MetaSuite Generator application runtime parameter in the PPTIPT file to connect to a specific database:

```
SYS-DB-CONNECT = 'attach string'
```

or

```
SYS-DB-CONNECT = 'DEFAULT'
```

Oracle/RDB users should add the following statements in their run script:

1. To specify the DEFAULT database to access specify:
\$DEFINE SQL\$DATABASE Rdb-filename
2. MetaSuite Generator requires that DATE VMS type columns are formatted as YYYY-MM-DD:
\$DEFINE LIB\$DT_FORMAT LIB\$DATE_FORMAT_037

6.2. CA/Ingres

CA/Ingres users should supply the following MetaSuite Generator application runtime parameter in the PPTIPT file to connect to a specific database:

```
SYS-DB-CONNECT = 'database name'
```

CA/Ingres users should add the following statements in their run script:

1. MetaSuite Generator requires that DATE type columns are formatted as YYYY-MM-DD:
\$DEFINE II_DATE_FORMAT SWEDEN