

# VisualAge UNIX 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 *VisualAge on UNIX* as Generator environment.  
For more detailed information, refer to the *Installation and Setup Guide*.
2. Create the MetaSuite Generator Dictionary for VisualAge on UNIX.  
For more detailed information, refer to the *Generator Manager User Guide*.

# About This Manual

This guide describes how to install the MetaSuite VisualAge UNIX 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.

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# MetaSuite Generator Runtime Installation

## 3.1. Runtime Components

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

```
COBOL sources:  MS*813.cbl
UNIX scripts:   mkcob
                mkcobdb2
                mkrts813
```

## 3.2. UNIX Environment

Create a MetaSuite UNIX account called "metasuit" with the following directories:

```
$HOME/user
$HOME/system
```

## 3.3. Install Runtime

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

After transferring these files perform the following operation on UNIX:

```
chmod +x mkrts813
```

---

**Note:** Make sure that files are transferred case sensitive and as text files (ASCII CRLF)

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### Compile & Link Runtime

To compile and link all the runtimes, execute the previously transferred `mkrts813` script on UNIX. This script has the following contents:

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

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```
rm -f ms???813  
cob2 -q"NOADATA" -o MS???813 ms???813.cbl  
rm -f ms???813.lst
```

---

**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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# Compile a MetaSuite Generator Program

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

```
mkcob  
mkcobdb2
```

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

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## 4.1. Compilation

Transfer the `x:\installdirectory\GENVisualAge_UNIX\MGL\<<MXL-name>.mgl` to `$HOME/user/<MXL-name>.cbl`

```
cd $HOME/user  
mkcob MXL-name
```

Following procedure will be executed:

```
mv $1.mgl $1.cbl  
rm -f $1  
cob2 -q"NOADATA" -o $1 $1.cbl
```

## 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.

### DB2/6000 and DB2/PE

Transfer the `x:\installdirectory\GENVisualAge_UNIX\MGL\<<MXL-name>.mgl` to `$HOME/user/<MXL-name>.mgl`

```
cd $HOME/user  
mkcobdb2 MXL-name
```

The following procedure will be executed:

```
rm -f $1
rm -f $1.obj
mv $1.mgl $1.sqb
rm $1
cob2 -q"NOADATA NOTEST" -q"SQL('database **dbname** bindfile blocking
all datetime iso isolation cs')" -o $1 $1.sqb
#db2 db2start
db2 connect to **dbname**
db2 bind %1.bnd blocking all datetime iso isolation cs
db2 connect reset
#db2 db2stop
```

---

# 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\GENVisualAge_UNIX\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\GENVisualAge_UNIX\MRL\<MXL-name>.mrl` to `$HOME/user/<MXL-name>.mrl`.

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

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## 5.1. Example

The following is an example run script, which is generated for the MetaSuite program `ex0`:

```
# AIX Runscript For ex0-0003
rm ex0.log
rm ex0.lst
rm ex0.d01
export PPTIPT=NUL
export PPTF01=employee-master
export PPTLOG=ex0.log
export PPTLST=ex0.lst
export PPTTD01=ex0.d01
ex0
echo $?
```

You will be able to run this script after the following steps:

```
cd $HOME/user
chmod +x ex0.mrl
```

# RDBMS Run Considerations

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

```
XXXXXXXXX.exe SYS-DB-PASSWORD = 'password'
```

### 6.1. DB2/6000

DB2/6000 users should supply the following MetaSuite Generator application runtime variable in the PPTIPT file to connect to a specific database:

```
SYS-DB-CONNECT = 'server'
```