

Omb MultiOberon/BlackBox Quick-Start

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Omb is the instance of MultiOberon compiler with BlackBox backend. Based on Omnic CP DevCompiler.
Version 0.95 27-Jun-2020

Installation.

On Windows (this color - for Windows):

For BlackBox 1.6

```
win_toinstall.vbs 16 <path-to-blackbox>
```

For BlackBox 1.7

```
win_toinstall.vbs 17 <path-to-blackbox>
```

On Linux (this color – for Linux):

Download and install <https://blackbox.obertone.ru/download>

```
tclsh lin_toinstall.tcl 17 <path-to-blackbox>
```

How to Start from Black Box

1 Installation

1. Preconditions.

Omb doesn't use any other services except BlackBox.

2. Omb/Docu/Quick-Start.odc, Omtest/Docu/Quick-Start.odc

3. Compile the following modules:

```
^Q DevCompiler.CompileThis OmcCfgfile OmcTarget OmcCRuntime OmcHooks OmcDialog
OmcOPM OmcOPT OmcOPU OmcOPB OmcOPS OmcOPP OmcDump OmcTester OmcParams
OmcCommandParams OmcOdcSource OmcTxtSource OmcRuntimeStd OmcDialogStd
OmcDialogConsole OmcCompiler OmcLoader OmbOPE OmbOPH OmbOPL486 OmbOPC486
OmbOPV486 OmbInlink OmbLnkBase OmbLnkLoad OmbLnkWritePe OmbLnkWriteElf
OmbLnkWriteElfStatic OmbLinkPortableProcessor OmbParams OmbBackEnd OmbCompiler
OmbLinker
```

3 Compiling the examples

Compile the following modules:

```
^Q OmbCompiler.CompileThis OmtestHelloWorld OmtestFormats OmtestDateTime
OmtestMkTraps OmtestHeap
```

Link executives to call them from console

```
^Q OmbLinker.LinkExe -o "Omtest/Code/OmtestHelloWorld.exe"
Kernel$+ Log Math Strings OStrings OLog HostConLog Runner OmtestHelloWorld
^Q OmbLinker.LinkExe -o "Omtest/Code/OmtestFormats.exe"
Kernel$+ Log Math Strings OStrings OLog HostConLog Runner OmtestFormats
^Q OmbLinker.LinkExe -o "Omtest/Code/OmtestDateTime.exe"
Kernel$+ Log Math Strings OStrings OLog Times HostConLog HostTimes Runner
OmtestDateTime
^Q OmbLinker.LinkExe -o "Omtest/Code/OmtestMkTraps.exe"
Kernel$+ Log Math Strings OStrings OLog HostConLog Runner OmtestMkTraps
^Q OmbLinker.LinkExe -o "Omtest/Code/OmtestHeap.exe"
Kernel$+ Log Math Strings OStrings OLog HostConLog Runner OmtestHeap
```

4 Running the examples

4.1. The simplest Hello, World example

```
^Q OmtestHelloWorld.MAIN
```

Logging with char, int and real formats

```
^Q OmtestFormats.MAIN
```

4.2 Shows date, time and delay

```
^Q OmtestDateTime.MAIN
```

4.3 Traps handling abilities of runtime

Simple Assert

```
^Q "OmtestMkTraps.RunOpt('a')"
```

Simple Halt

```
^Q "OmtestMkTraps.RunOpt('h')"
```

Zero divide

```
^Q "OmtestMkTraps.RunOpt('z')"
```

Nil pointer dereference

```
^Q "OmtestMkTraps.RunOpt('p')"
```

4.4 Dynamic memory and garbage collector

```
^Q OmtestHeap.MAIN
```

5 Self-Compiling Omb Shell

Self-Compile console Omb Shell.

```
^Q OmbCompiler.CompileThis OmcCfgfile OmcTarget OmcCRuntime OmcHooks OmcDialog  
OmcOPM OmcOPT OmcOPU OmcOPB OmcOPS OmcOPP OmcDump OmcTester OmcParams  
OmcCommandParams OmcOdcSource OmcTxtSource OmcRuntimeStd OmcDialogStd  
OmcDialogConsole OmcTimesDialog OmcCompiler OmcConsole OmcShell OmbOPE OmbOPH  
OmbOPL486 OmbOPC486 OmbOPV486 OmbInlink OmbLnkBase OmbLnkLoad OmbLnkWritePe  
OmbLnkWriteElf OmbLnkWriteElfStatic OmbLinkPortableProcessor OmbParams  
OmbBackEnd OmbCompiler OmcLoader OmbLinker OmcLoaderRoutines OmcOcfLoader OmbSh
```

Self-Link console Omb Shell.

```
^Q OmbLinker.LinkExe -pl 1 -o "Bbwe/ombsh" $+Kernel Log Math Strings OStrings  
OLog HostConLog Runner Testing Files HostFiles OmcCfgfile Dates Times HostTimes  
Dialog Stores Sequencers Models Services Fonts Meta Converters Ports Views  
Controllers Properties Mechanisms Containers Printers Printing OmcTimesDialog  
Documents TextModels TextRulers TextSetters TextViews OmcTarget OmcCRuntime  
OmcDialog OmcHooks OmcOPM OmcOPT OmcOPB OmcOPU OmcOPS OmcOPP OmcTester OmcParams  
OmcOdcSource OmcDialogConsole OmcRuntimeStd OmcConsole OmcShell OmbOPE OmbOPH  
OmbOPL486 OmbOPC486 OmbOPV486 OmbParams OmbBackEnd OmcLoader OmcLoaderRoutines  
OmcOcfLoader OmbInlink OmbLnkBase OmbLnkLoad OmbLnkWritePe OmbLnkWriteElf  
OmbLnkWriteElfStatic OmbLinkPortableProcessor OmbSh
```

```
^Q OmbLinker.LinkExe -o "Bblue/ombsh" $+Kernel Log Math Strings OStrings OLog  
HostConLog Runner Testing Files HostFiles OmcCfgfile Dates Times HostTimes  
Dialog Stores Sequencers Models Services Fonts Meta Converters Ports Views  
Controllers Properties Mechanisms Containers Printers Printing OmcTimesDialog  
Documents TextModels TextRulers TextSetters TextViews OmcTarget OmcCRuntime  
OmcDialog OmcHooks OmcOPM OmcOPT OmcOPB OmcOPU OmcOPS OmcOPP OmcTester OmcParams  
OmcOdcSource OmcDialogConsole OmcRuntimeStd OmcConsole OmcShell OmbOPE OmbOPH  
OmbOPL486 OmbOPC486 OmbOPV486 OmbBackEnd OmcLoader OmcLoaderRoutines  
OmcOcfLoader OmbInlink OmbLnkBase OmbLnkLoad OmbLnkWritePe OmbLnkWriteElf  
OmbLnkWriteElfStatic OmbLinkPortableProcessor OmbSh
```

6 Unloading Omb Compiler

```
^Q DevDebug.UnloadThis OmbLinker OmbCompiler OmbBackEnd OmbParams  
OmbLinkPortableProcessor OmbLnkWriteElfStatic OmbLnkWriteElf OmbLnkWritePe  
OmbLnkLoad OmbLnkBase OmbLinkWinProcessor OmbInlink OmcCompiler OmcCommandParams  
OmbOPV486 OmbOPC486 OmbOPL486 OmbOPH OmbOPE OmcTimesDialog OmcDialogStd  
OmcRuntimeStd OmcOdcSource OmcParams OmcTester OmcDump OmcOPP OmcOPS OmcOPU  
OmcOPB OmcOPT OmcOPM OmcDialog OmcHooks OmcCRuntime OmcTarget OmcCfgfile Runner  
Testing
```

How to Start from Command Line.

1 Installation

1. Preconditions.

Omb doesn't use any other services. Process all the commands below from the Mob-master root dir.

2 Compiling examples

```
Bbwe\ombsh co OmtestHelloWorld
```

```
Bblue/ombsh co OmtestHelloWorld
```

A new symbol file is created first, then OmtestHelloWorld.mod is compiled to Omtest/Code/HelloWorld.ocf. A list of files can be compiled.

```
Bbwe\ombsh ru OmtestHelloWorld
```

```
Bblue/ombsh ru OmtestHelloWorld
```

Run OmtestHelloWorld.ocf with Omb Shell as dynamically loaded module.

```
Bbwe\ombsh ex OmtestHelloWorld
```

```
Bblue/ombsh ex OmtestHelloWorld
```

Execute means both compile and run OmtestHelloWorld.mod with Omb Shell.

```
Bbwe\ombsh ex -odc OmtestHelloWorld
```

```
Bblue/ombsh ex -odc OmtestHelloWorld
```

Option `-odc` takes BlackBox OmtestHelloWorld.odc file instead of mod, valid for co and ru commands.

```
Bbwe\ombsh co -odc OmtestHelloWorld OmtestFormats OmtestDateTime OmtestMkTraps  
OmtestHeap
```

```
Bblue/ombsh co -odc OmtestHelloWorld OmtestFormats OmtestDateTime OmtestMkTraps  
OmtestHeap
```

The command above compiles all the examples listed

3 Linking modules

```
Bbwe\ombsh li Kernel+ Log Math Strings OStrings OLog HostConLog Runner  
OmtestHelloWorld -dos -o Omtest/Code/OmtestHelloWorld
```

```
Bblue/ombsh li Kernel+ Log Math Strings OStrings OLog HostConLog Runner  
OmtestHelloWorld -dos -o Omtest/Code/OmtestHelloWorld
```

Links to executive OmtestHelloWorld

4 Example set

```
bwe_tomake
```

```
bue_tomake.sh
```

Makes all the executives of example set

```
bwe_toclean
```

```
bue_toclean.sh
```

Cleans all the executives of example set

Run examples

```
Omtest\Code\OmtestHelloWorld
```

```
Omtest/Code/OmtestHelloWorld
```

```
Omtest\Code\OmtestFormats
```

```
Omtest/Code/OmtestFormats
```

```
Omtest\Code\OmtestDateTime
```

```
Omtest/Code/OmtestDateTime
Omtest\Code\OmtestHeap
Omtest/Code/OmtestHeap
Traps handling abilities of runtime
Simple Assert
Omtest\Code\OmtestMkTraps -trap a
Omtest/Code/OmtestMkTraps -trap a
Simple Halt
Omtest\Code\OmtestMkTraps -trap h
Omtest/Code/OmtestMkTraps -trap h
Zero divide
Omtest\Code\OmtestMkTraps -trap z
Omtest/Code/OmtestMkTraps -trap z
Nil pointer dereference
Omtest\Code\OmtestMkTraps -trap p
Omtest/Code/OmtestMkTraps -trap p
```

5 Tests set

```
bwe_tests_tomake
bue_tests_tomake.sh
Makes all the tests prepared: OmtestOmcSimpleTest OmtestOmcStringsTest OmtestOmcSystemTest
OmtestOmcImportsTest OmtestOmcExtensionsTest OmtestOmcBoundTest OmtestOmcAdvancedTest
bwe_tests_run
bue_tests_run.sh
Runs all the compiler tests
```

Change Log

may 2019 original MultiOberon pre-version 0.8 released
nov 2019 MultiOberon pre-version 0.9 released
jun 2020 MultiOberon pre-version 0.95 released

Use it and enjoy! - Убъsalos y disfrûtalos! - Bonne utilisation - Приятного использования - Powodzenia - Viel Spaß

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