

STEP ONE • Choose an option

STEP TWO

Option One  
Optimized Code Generation

Develop application using OS PAL with gcc x86 on Linux or Windows host

Configure target OS, Profiler, Interface Optimizer and system settings

Generate Interface code for target OS

Output:  
Unmodified application code  
Optimized interface files

Native compiler

Output:  
Cross-OS Interface object  
Existing OS Interface object  
Application objects

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Option Two  
Full Source Package Generation

Develop application using your target IDE

Native compiler

Generate source package from OS PAL and perform manual configuration

Output:  
Cross-OS Interface library  
Existing OS Interface library  
Application object code

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Linker

Your application executable

Download/run on your target OS

Generated Profiler data (optional)

View data using OS PAL Profiler

### Optimized Code Generation: Option 1

- Perform your development work on an Eclipse-based Windows or Linux host machine with provided GNU tools for x86
- Generate optimized OS Abtractor Interface code for your target, specific to your application
- Generate project files for your target IDE/tools environment
- Enable target profiling of the OS Abtractor Interface and of the application functions to collect valuable performance data and generate comparative performance reports.
- Selectively optimize each OS Abtractor Interface function for performance based on its usage in your application
- Automatically generate initialization & configuration code based on the settings you chose in the GUI-based wizard

### Full Source Package Generation: Option 2

- Suitable for applications that contains its own libraries
- Use with your preferred IDE/tools instead of the provided OS PAL Eclipse-based environment
- Provides the Cross-OS Development Platform in a source code library format which contains all the Interface functions for a specific target OS
- Requires manual configuration and initialization instead of using the OS PAL GUI-based wizard

## Don't Get Stuck To One OS!

- Your current OS may not offer support for the next generation hardware
- Your royalty payments might become expensive on your current OS and you may be forced to switch to a more economical or free open-source based platform
- Your customers or markets may demand that you support a different OS in the future
- Your current OS may not always offer support for the best tools, drivers, protocols and middleware.
- Your OS vendor may go out of business or offer poor service
- You may need to move to an OS that offers better performance and smaller footprint
- You may need to move to an OS that meets certain certification standards

## OS ABTRACTOR Cross-OS Development Platform Contents:

### > One OS Abtractor Interface for the OS you are moving from

Cross-OS™ Interface from Mapusoft	Linux®/POSIX Interface
VxWorks® Interface	micro-ITRON® Interface
Nucleus® Interface	Windows® Interface
pSOS® Interface	

### > Specific Cross-OS Target Specific Module for the target OS

### > Library Package Generator

- Full source code of the OS Abtractor Interface and Cross-OS Target Specific Module for your target platform
- Full libraries of the OS Abtractor Interface and Cross-OS Target Specific Module for your host platform (Windows or Linux)
- Sample demo applications for reference
- Project build files for supported tools & IDEs for your target environment

### > Optimized Target Code Generator

- Generates the OS Abtractor Interface and Cross-OS Target Specific Module source code, specifically optimized for your application and target environment
- Creates project files for your target IDE
- Includes the system settings you chose in the GUI-based Wizard

### > OS Simulator for your chosen OS Abtractor Interface for host development/simulation

### > Profiler to view performance data regarding your application, platform and to generate timing reports

# TECHNICAL HIGHLIGHTS

## It's Not Your Typical Wrapper:

- Provides most of the OS features by itself and does not depend on the OS, except for a few features such as priority scheduling, semaphore, messaging and thread suspend/resume

## Includes a Process Feature:

- Develop your application as a single or multiple processes utilizing the user shared region provided for your global variables
- Create a new processes by compiling the application separately or by launching it from your main application
- Provides software-based process features, even if the underlying target OS does not offer support
- Applications can pre-allocate heap memory during process creation. Can also set maximum limits regarding the amount of heap memory each application is allowed to prevent applications from using up all of the system memory and impacting other applications

## API Flexibility:

- Use the same OS Abtractor Interface APIs within a single or across multiple processes

## Thread Pooling:

- Applications can pool threads to increase platform robustness & performance by eliminating the overhead associated with actual task creation & task deletion at run-time

## Mission Critical Features:

- Applications have the ability to asynchronously recover from fatal software errors through a soft reset by rolling the stack back to the start of the application

## Highly Scalability:

- The OS PAL GUI-based wizard reads your application to custom generate optimized OS Abtractor Interface code that is specific to your application resulting in increased performance and reduction of memory footprint

## Target Independence:

- Products support any target hardware supported by your target OS Architecture: Support for 16/32/64 bit architectures

## Processor:

- SMP and UP modes are supported

## OS Abtractor Interface API Coverage & Target OS Support

Please refer to the latest release notes for the API coverage offered by the OS Abtractor Interface, found at this link: [http://mapusoft.com/admin/wp-content/uploads/release\\_notes\\_138.pdf](http://mapusoft.com/admin/wp-content/uploads/release_notes_138.pdf)

## More Information

A free evaluation can be downloaded here: <http://mapusoft.com/downloads/>

You can contact MapuSoft to request a license key for evaluation here: <http://mapusoft.com/contact>

User manuals & technical documentation can be found here: <http://mapusoft.com/products/techdata/>

For any technical or sales questions please submit a ticket at the MapuSoft support site

here: <http://mapusoft.com/support/>