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**PikeOS**

PikeOS is a powerful and efficient paravirtualization real-time operating system based on a separation microkernel. It supports multiple additional operating systems (OSs) and runtime environments (RTEs), such as Linux, ARINC 653, and POSIX, together with their associated applications. All OSs and RTEs run concurrently and cooperatively in their own partitions. The PikeOS partitioning system, in conjunction with its internal protection mechanisms, provides the highest available level of safety and security.

Safety, Security, and Virtualization

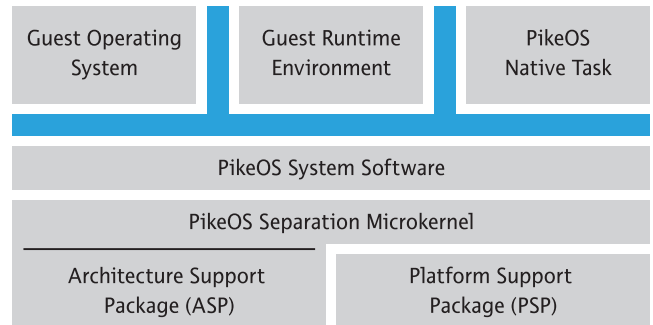
The native design of the unique PikeOS separation microkernel specifically addresses the requirements of safe and secure systems. All drivers, stacks, hard real-time applications, and hosted OSs or RTEs reside in separate address spaces with pre-defined I/O access controlled by PikeOS. The paravirtualization capability of PikeOS enables the combination of applications with different safety and security certification levels on one platform. It supports hardware convergence efforts and opens the door for open source components to be utilized in safety and security critical systems.

Choose the environment you need

PikeOS offers support for a variety of hosted OSs, RTEs and APIs. This variety enables legacy applications (for instance, Ada) to run concurrently with new applications based on standards like POSIX and ARINC 653. All these OSs, runtime environments and APIs run on the same PikeOS kernel and can be combined as needed.

End to end development solution

Developing embedded applications that use a partitioned system requires specialized support from the development environment; it's not the same as developing standard desktop or mainframe applications. Embedded developers need guided configuration, remote debugging (often down to the hardware instruction level), target monitoring, remote application deployment, and timing analyses, in addition to standard application development features such as compilers and assemblers. With the CODEO IDE and the COGNITO time and system analyzer extension, SYSGO offers a complete environment for embedded development.

**FEATURES:**

- Separation microkernel based
- MILS compliant
- Unique combination of virtualization and RTOS technology
- Strict time and resource partitioning
- Developed according to DO-178B and IEC 61508
- OS choices: Linux (Kernel 2.4.20, 2.6.15) and OSEK
- Runtime Environments: (RTEs) POSIX (PSE51, PSE52), Java, Ada, μITRON, Soft-PLC (CoDeSys)
- APIs: ARINC 653, VxWorks subset, PikeOS Kernel and SSW API
- Available for PowerPC, x86, and MIPS
- One Integrated Development Environment (IDE) for all OSs, RTEs and APIs