QNX Operating Systems

QNX is a commercial [Unix-like](https://en.wikipedia.org/wiki/Unix-like) [real-time operating system](https://en.wikipedia.org/wiki/Real-time_operating_system), aimed primarily at the [embedded systems](https://en.wikipedia.org/wiki/Embedded_system) market. The developer is [BlackBerry Ltd](https://en.wikipedia.org/wiki/BlackBerry_Ltd) and it belongs to the OS family Unix-like.  The QNX® Neutrino® RTOS has been qualified to various safety and security standards for use in products with high criticality and low tolerance for failure.

* Technology

The QNX kernel contains only [CPU scheduling](https://en.wikipedia.org/wiki/Scheduling_(computing)), [interprocess communication](https://en.wikipedia.org/wiki/Interprocess_communication), [interrupt](https://en.wikipedia.org/wiki/Interrupt) redirection and timers. Everything else runs as a user process, including a special process known as proc which performs process creation and [memory management](https://en.wikipedia.org/wiki/Memory_management) . QNX interprocess communication consists of sending a message from one process to another and waiting for a reply.  This is a single operation, called MsgSend.

* History

[Gordon Bell](https://en.wikipedia.org/wiki/Gordon_Bell_(QNX)) and [Dan Dodge](https://en.wikipedia.org/wiki/Dan_Dodge) were students at the [University of Waterloo](https://en.wikipedia.org/wiki/University_of_Waterloo) in 1980.  Both were convinced there was a commercial need for such a system, and moved to the high-tech planned community [Kanata, Ontario](https://en.wikipedia.org/wiki/Kanata,_Ontario), to start Quantum Software Systems that year.  One of first widespread uses of the QNX real-time OS (RTOS) was in the non-embedded world. [Cisco](https://en.wikipedia.org/wiki/Cisco_Systems)'s [IOS-XR](https://en.wikipedia.org/wiki/IOS-XR) built about 2004–2005[[7]](https://en.wikipedia.org/wiki/QNX#cite_note-QNXDel-7) is based on QNX software, QNX SDP 7.0 was released in March, 2017.

* Description

As a [microkernel](https://en.wikipedia.org/wiki/Microkernel)-based OS, QNX is based on the idea of running most of the [operating system](https://en.wikipedia.org/wiki/Operating_system) [kernel](https://en.wikipedia.org/wiki/Kernel_(computing)) in the form of a number of small tasks, known as *servers*. The system is quite small, with earlier versions fitting on a single [floppy disk](https://en.wikipedia.org/wiki/Floppy_disk).