

# **Splitting the Linux Kernel for Fun and Profit**

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## Abstract

This talk looks at a pragmatic attempt at strengthening the security properties of Linux by introducing a degree of intra-kernel protection into the Linux kernel (supported by CPU Virtualization silicon features). Consider it, if you like, an attempt at retrofitting a 'micro-kernel' interface into traditionally monolithic Linux whilst maintaining a single Linux code base (yes it's still Linux), no need for a hypervisor and with reasonable performance characteristics. The motivation for the work was the frightening increase in reliance on the security properties of the Linux kernel driven by trends away from full-virtualization solutions such as VMWare and KVM and towards lighter weight containment approaches led by Docker, et al for application hosting, deployment and consolidation.