

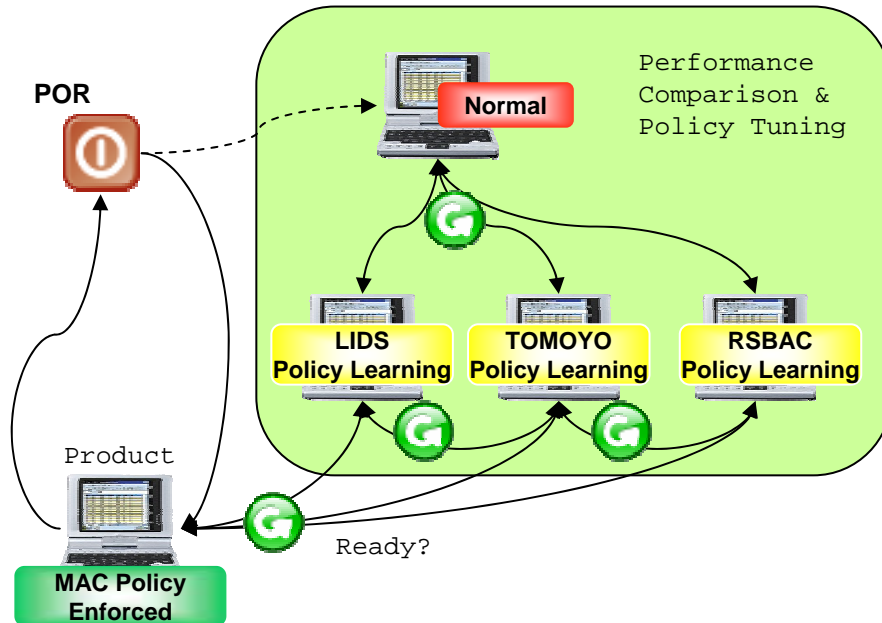


## Mandatory Access Control Comparison for Embedded Linux

Seiji Munetoh / IBM Japan

### What is demonstrated

A test bed for various kernel security enhancement. We use "kexec" to switch them without Flash update. You can tune up the policy at anytime and anyplace!



### How was the Linux improved

Now the embedded system are faced on the same threat which worried about by desktop and server system, and MAC policy enforcement is one of the strong security feature supported by Linux Kernel. However, the resource consumption and the performance impact is serious here. and developer have to create the whole AC policy by him/herself from zero.

Linux Zaurus might be a good test bed to investigate which enhancement satisfy the security requirements. It will be able to support wide range of devices, from simple controller to rich PDA with GUI. The system developer can test the sizing, performance impact, ease of use and MAC policy description.

In addition, we should use a Secure Boot or Trusted Computing to protect the kernel itself.

The detail comparison report is available from CELF site <http://tree.celinuxforum.org/CelfPubWiki/MandatoryAccessControlComparison>

### Patch (Source Code) Availability

Many security enhancements are developed on the x86 platform but they also work for other architectures with some fixes.

### Hardware Information

Sharp Linux Zaurus SL-C860/760  
CPU: XScale (PXA255 400MHz)  
Memory 128MB(Flash), 64MB(RAM)

