

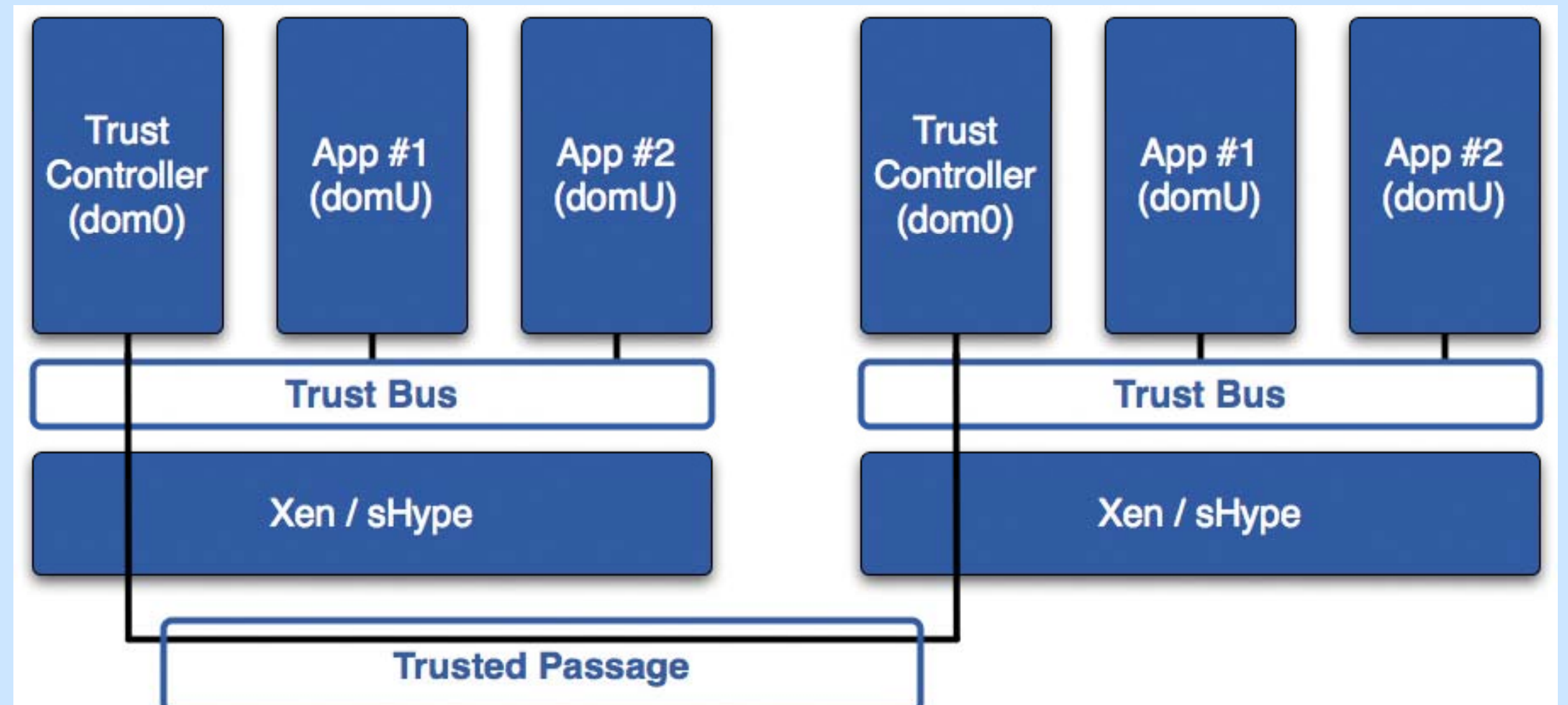
Trusted Passages

Martim Carbone, Jiantao Kong, Bryan D. Payne, Mustaque Ahamad, Wenke Lee, Karsten Schwan - *Georgia Institute of Technology*

Enabling Security Guarantees In Service Oriented Architectures

Trusted Passages combines virtualization with a distributed security management architecture to provide a notion of trust in service oriented networks.

- Setup and maintain security agreement over all hosts in a service oriented architecture
- Leverage virtualization to manage information flow, protect the trust controller and do host monitoring
- Distribute security management to all hosts servicing a connection request



Example of a trusted passage between two hosts

Approach and Impact

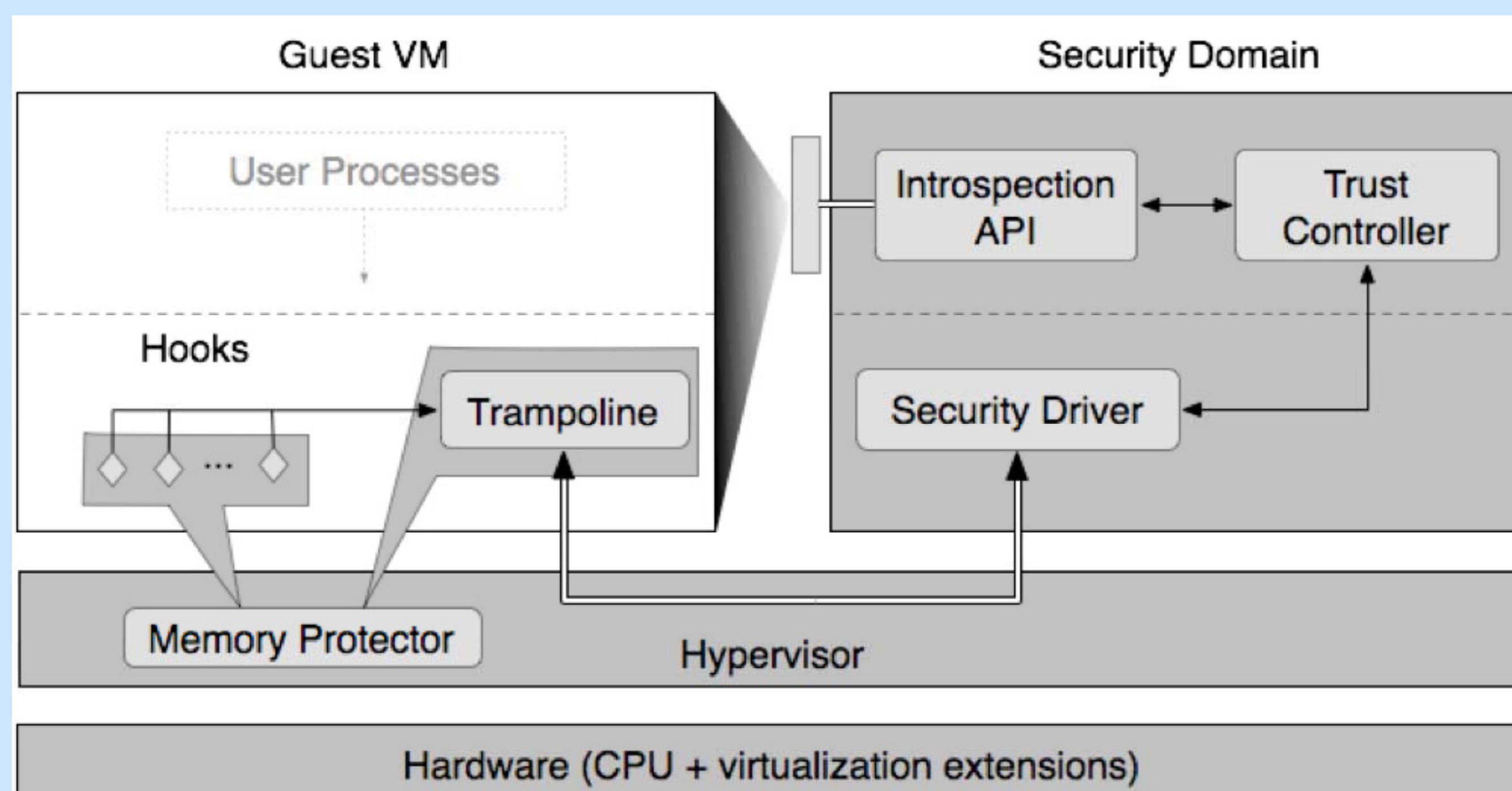
New approach

- Fine-grained VM monitoring
- Intrusion tolerance
- Filtering + Redirecting

Research Impact

- Dynamic distributed security management
- New VM monitoring techniques

Lares: Secure Active Monitoring of Untrusted VMs



- Protected hooks for secure fine-grained event monitoring
- Hypervisor-based memory protection
- Guest VM memory introspection