Registration

Execution

Guest

```
int is_page_free {
    if (page→free)
        return false;
    else {
        int page;
```
Hyperupcall Code (C)

```
BPF_MOV_64 r0, r1
BPF_JMP_IMM #04
BPF_LD_ABS r1, #08
BPF_ALU64_IMM r3, #
BPF_EXIT_INSN
```
eBPF Bytecode

Hyperupcall
Framework

- - - references - - - →

Guest OS
Data Structures

Hypervisor

eBPF Verifier

Hyperupcall
Registration
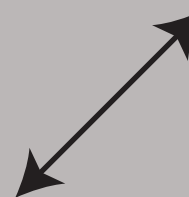
is page free

Hyperupcall Table

```
movl $0×ff12AB45, %
addl %ecx, %eax
xorl %esi, %esi
movl 4(%esp), %ebx
retl
```
Native Code

eBPF JIT Compiler
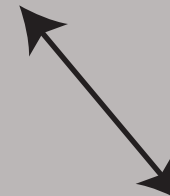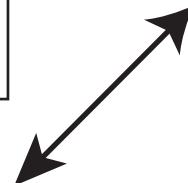
Hypervisor
Event
(Memory Pressure)