

Duckling

DUST-IN-TIME COMPILATION IN THE DUCKLING VIRTUAL MACHINE

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SOLUTION ELEMENTS

- DYNAMIC COMPILATION OF INTERPRETED BYTECODE
- LOOP DETECTION & COMPILATION OF THE HOTTEST LOOPS
- OPTIMIZATIONS PERFORMED AT RUNTIME



sub_p64
call_func output_p64
jmp_label jmp_label
step_gil div_p64
init_pany_type mul_p64
sub_p64_imm mov_p64_imm
add_p64_imm mov_pptr_pptr
defini

DVM

pushl %ebp
movl %esp, %ebp
call puts
leabe
movl \$0, %eax
leave
movl \$0, %eax
popl %ebp
retl %ecx, %ecx
cmpl %edx, %edx
movl 4(%esp), %ecx
addl \$1, %edx
xorl %edx, %edx
movl 8(%ebp), %ecx
jng L4
jle L5
movl %eax, %edx