Occupancy Detection: The Ins And Outs

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Abstract

Virtualization[1] is the hot topic in the operating systems these days. It is useful in many scenarios: server consolidation, virtual test environments, and for Linux enthusiasts who still cannot decide upon the which distribution is best.

The Kernel Virtual Machine, or **kvm** is a new Linux subsystem which leverages these virtualization extensions to add a virtual machine monitor (or hypervisor) capability to Linux.

1 Background

Virtualization is the hot topic in the operating systems[2] these days. It is useful in many scenarios: server consolidation, virtual test environments, and for Linux enthusiasts who still cannot decide upon the which distribution is best.

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2 x86 virtualization

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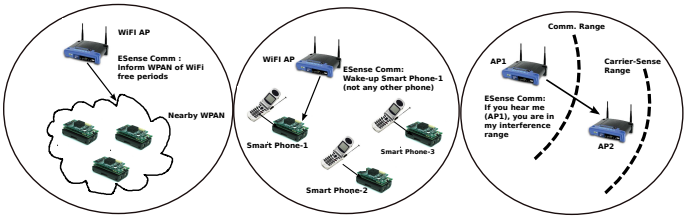

Figure 1: kvm: architecture

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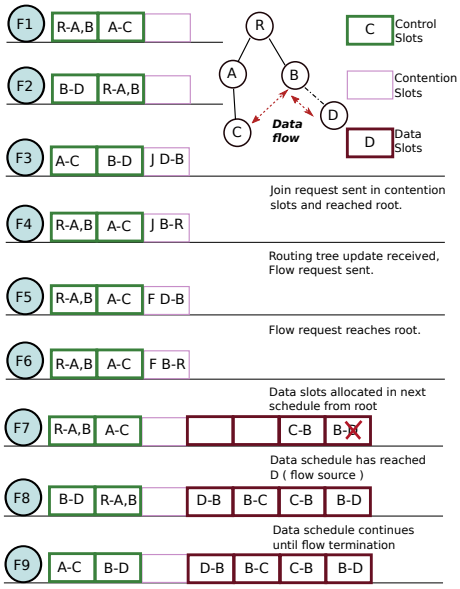

Figure 2: YAkvmA

3 MMU virtualization

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$$\int \frac{d\theta + \pi/2 + \sum_{i=2}^{10} i^2 + i\theta^2 + i/\pi}{1+\theta^2} = \tan^{-1}\theta + C \quad (2)$$

The Kernel Virtual Machine[2], or **kvm** is a new Linux subsystem which leverages these virtualization extensions to add a virtual machine monitor (or hypervisor) capability to Linux. The architecture is show in fig.2

[1] Consolidate all servers on one machine
[2] kvm, is a Linux subsystem

3.1 Shadow Paging

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3.2 Direct Mapping

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3.3 Hardware assisted Paging

Virtualization is the hot topic in the operating systems these days. It is useful in many scenarios: server consolidation, virtual test environments, and for Linux enthusiasts who still cannot decide upon the which distribution is best.

$$\frac{n!}{k!(n-k)!} = \binom{n}{k}$$

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4 Types of Virtualization

1. Full Virtualization
   - x86

Hello	Hello	Hello						
AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA
BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB
AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA	AAAAA
BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB	BBBBB

Table 1: Table Name

- MMU
- NIC
- IO

2. Para Virtualization

3. Hardware Assisted Virtualization

Hardware	I	II	III
a	1	2	3
b	1	2	3
c	1	2	3
d	1	2	3

Table 2: Virtualization I

5 x86 Hardware Virtualization Techniques

x86 hardware is difficult to virtualize because few instructions[5] do not trap when executed in different privilege level. Follow the table 2 on page 3 Virtualization is the hot topic in the operating systems these days. It is useful in many scenarios: server consolidation, virtual test environments, and for Linux enthusiasts who still $a+b*\pi+\theta+\sum_{i=2}^{10}\frac{n!}{k!}+\forall+\leq+\geq=10$ cannot decide upon the which distribution is best.

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Virtualization is the hot topic in the operating systems these days [7] [8] [9]. It is useful in many scenarios: server consolidation, virtual test environments, and for Linux[3] enthusiasts who still cannot decide upon the which distribution is best.

Software	I	II	III	IV	V
a	1	2	3	test	hello
b	1	2	3	test	hello
c	1	2	3	test	hello
d	1	2	3	test	hello

Table 3: Virtualization II

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[3] Linux is best operating system ever

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