





110011010

010111010

111100100

000101101

100110010

**Collector**

110011010

010111010

111100100

000101101

100110010

**Spy**



MELTDOWN: THE ATTACK

2

9

















▶ Meltdown needs some preconditions

▶ The **secret** is in the cache (value: 3)



▶ Both **Spypy** and **Collector** can read grey memory blocks

**RAM**

**“IT’S A 1”**

**“IT’S A 2”**

**“IT’S A 3”**

**SECRET ("3")**



grey box:  
memory block  
tested by **Collector**





allowed to  
read?





Gamechane





**SECRET ("3")**





# MELTDOWN: THE ATTACK

110011010  
010111010  
111100100  
000101101  
100110010

**Spy**

110011010  
010111010  
111100100  
000101101  
100110010

**Collector**



grey box:  
memory block  
tested by **Collector**

allowed to  
read?



- ▶ Meltdown needs some preconditions
- ▶ The **secret** is in the cache (value: 3)
- ▶ Both **Spy** and **Collector** can read grey memory blocks

# MELTDOWN: THE ATTACK



110011010  
010111010  
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000101101  
100110010

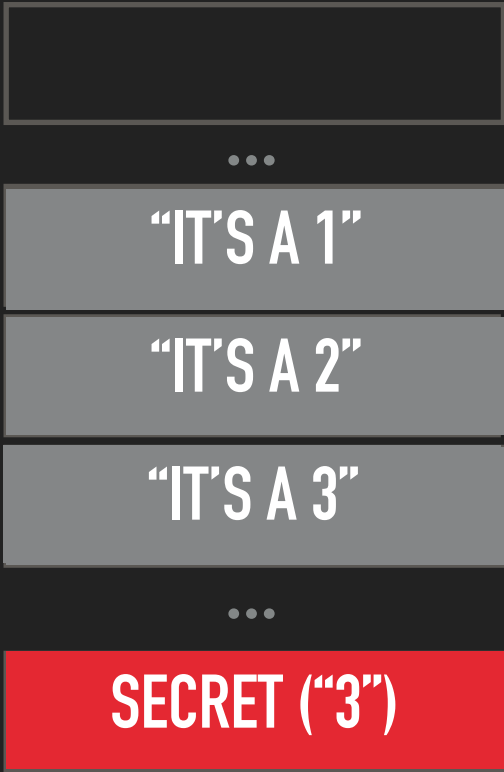
Spy

110011010  
010111010  
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000101101  
100110010

Collector



Cache



RAM