MTS: Bringing Multi-Tenancy to Virtual Networking
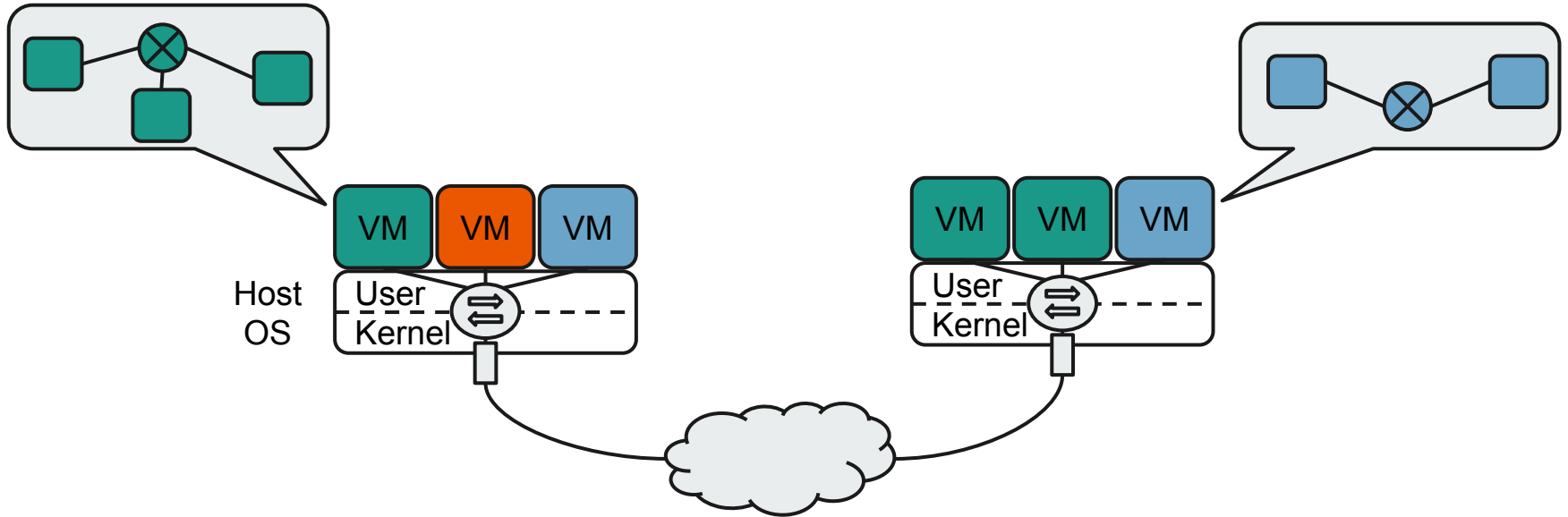
Kashyap Thimmaraju, Saad Hermak, Gábor Rétvári and Stefan Schmid
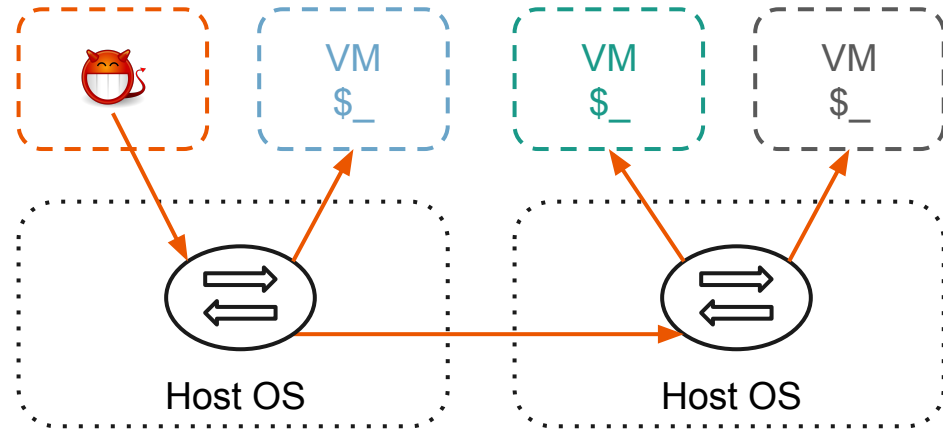
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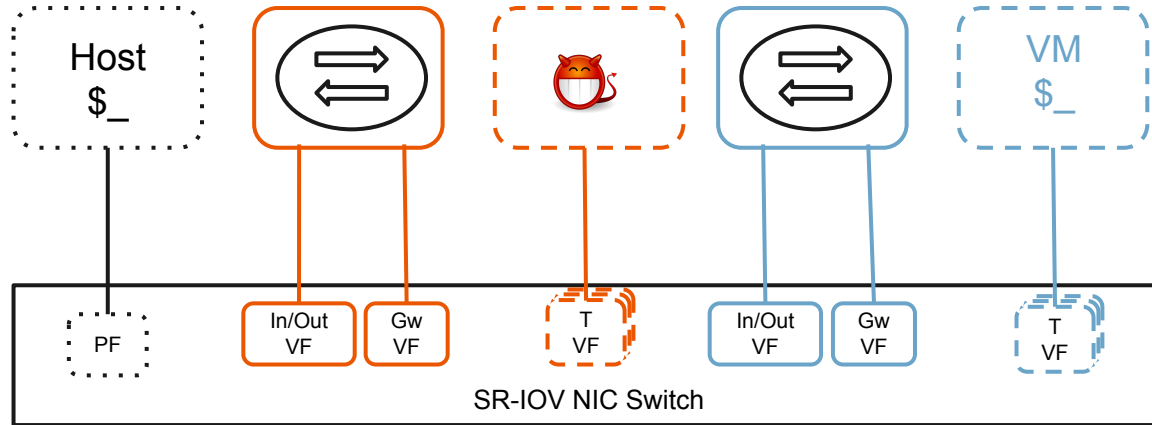
Virtual Networks in the Cloud

Exploiting Virtual Switches in the Cloud
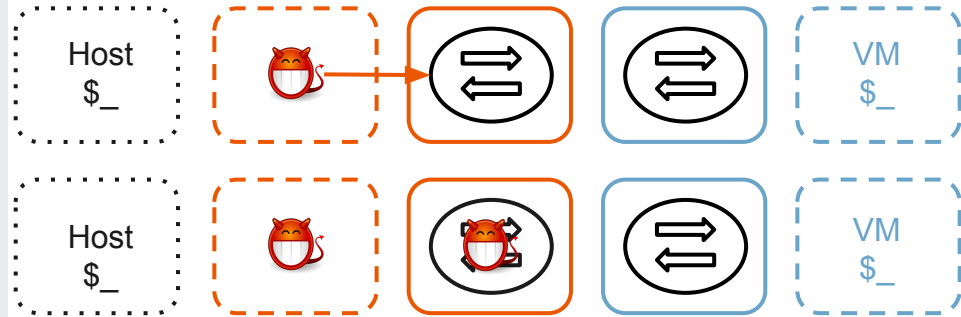
In SOSR'18
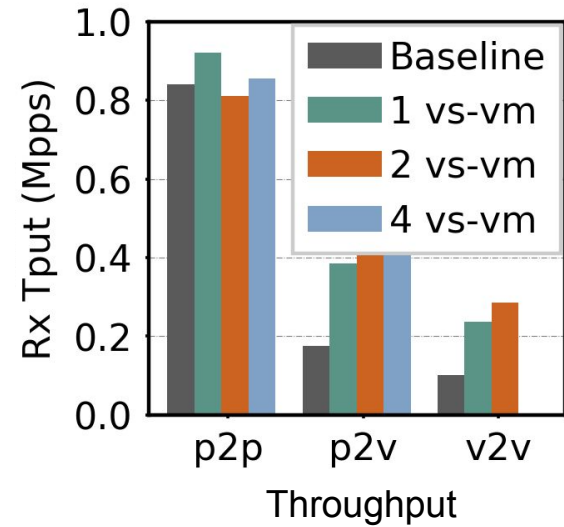
Our Key Idea in ATC'19

A PCIe-based design

Isolate Compromised Tenants

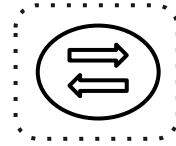# Increase Network Throughput

Decompose Configuration

State-of-the-art

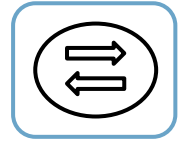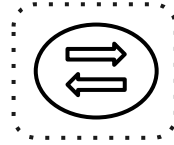|	
	ARP
	1. Red
	2. Blue
	Multicast
	1. Red
	2. Blue
	Broadcast
	1. Red
	2. Blue
	Unicast
	1. Red
	2. Blue
	...

MTS
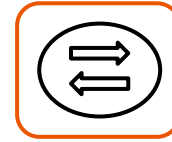
ARP
Multicast
Broadcast
Unicast
...
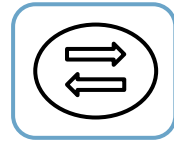
ARP
Multicast
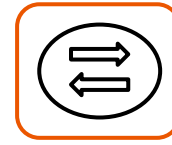Broadcast
Unicast
...

Include vswitch CPU Cycles in Pricing

State-of-the-art

1. Data transfer
2. Configuration

MTS

1. Data transfer
2. Configuration
3. CPU cycles for vswitch

Come to our talk

To better understand the security-performance-resource tradeoff of our system

- Track I: Virtualization Flavors
- Thursday July 11th, 2019
- 3:00 p.m.
- www.github.com/securedataplane

Security   Performance   Resource