



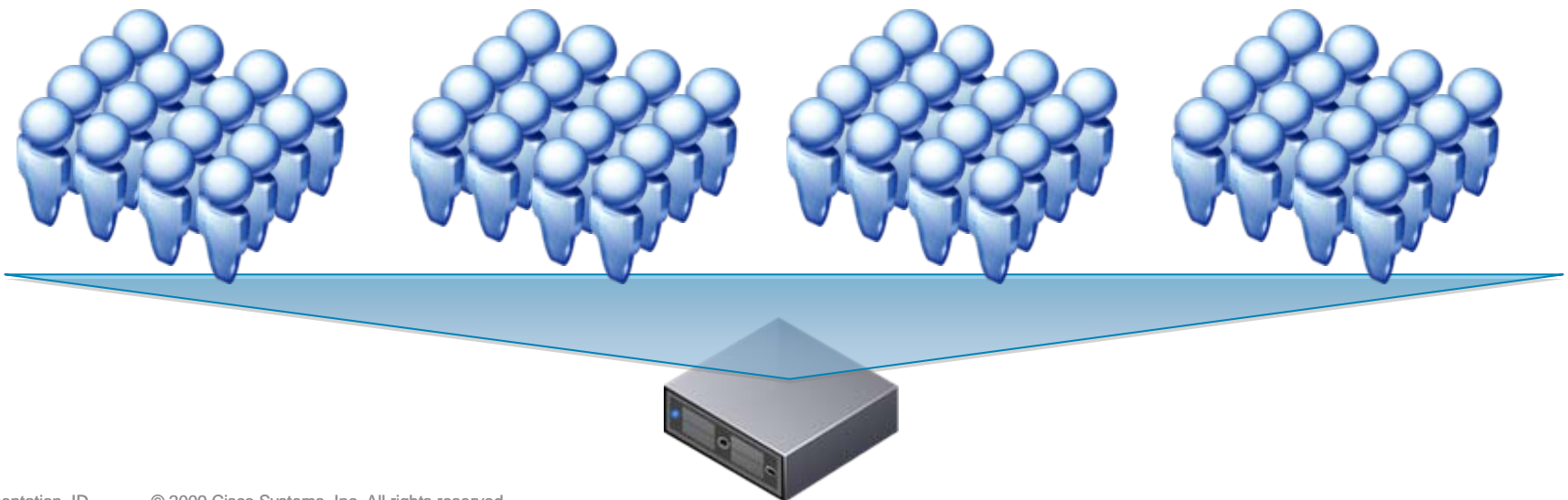
## High-Density VM Deployment with the Nexus 1000V



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# High-Density VM Deployment

- **100s of VMs** per server for virtual desktop deployment
- Enabled by **new hardware**
  - Cisco Unified Computing System hosts 160 VMs per blade
- High-Density reduces **OPEX** and **CAPEX**



# High-Density VM Deployment Consideration



How can I **manage and monitor** this **dense and dynamic** environment ?

How can I **secure and protect** my datacenter **like before** yet leveraging all the **benefit of Virtualization**

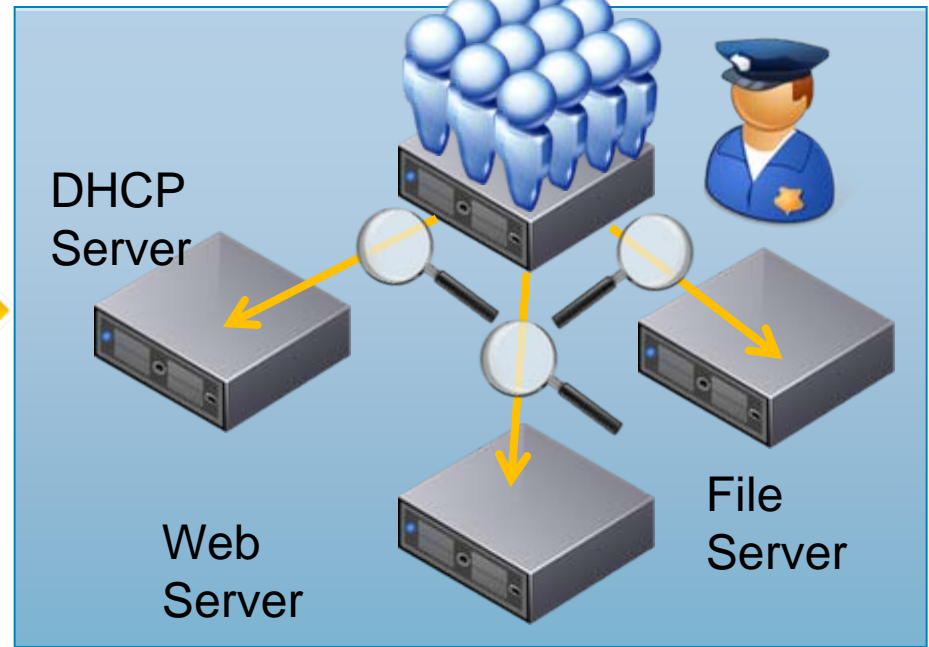


# Blurring of Campus and Data Center

- Campus and data center used to be separated
- Virtual desktop blurs boundaries
- Need to protect virtual desktop just like a campus
- High VM density requires effective troubleshooting techniques



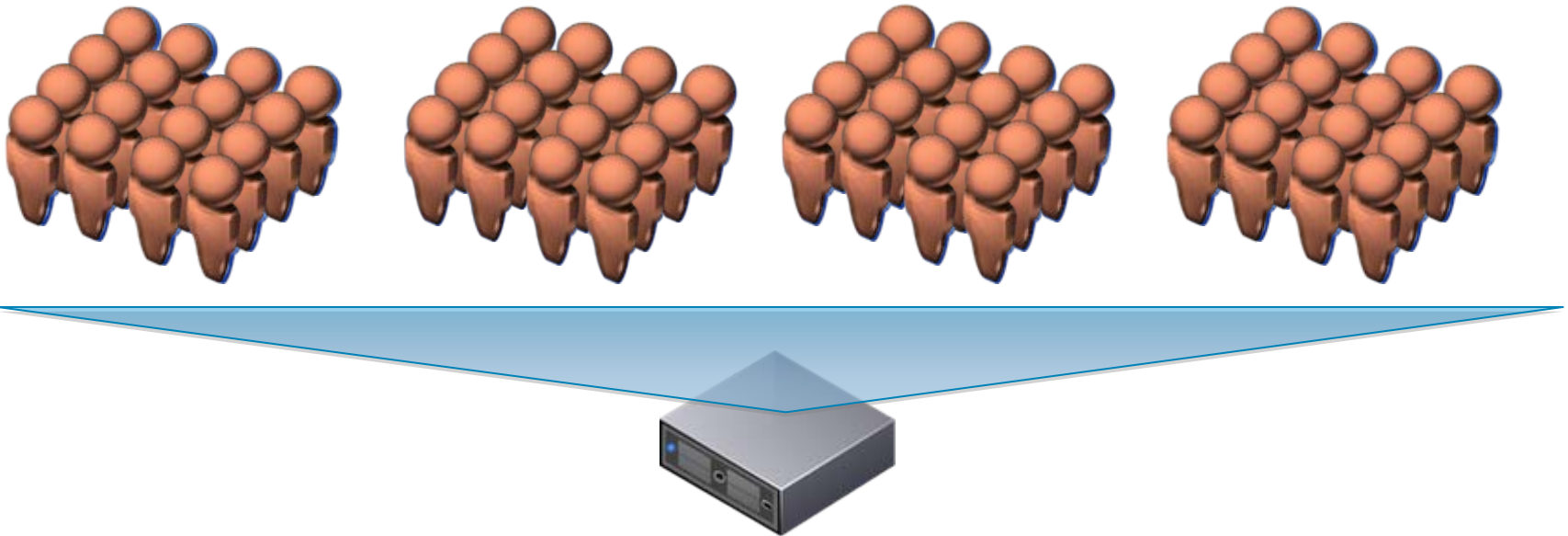
Campus



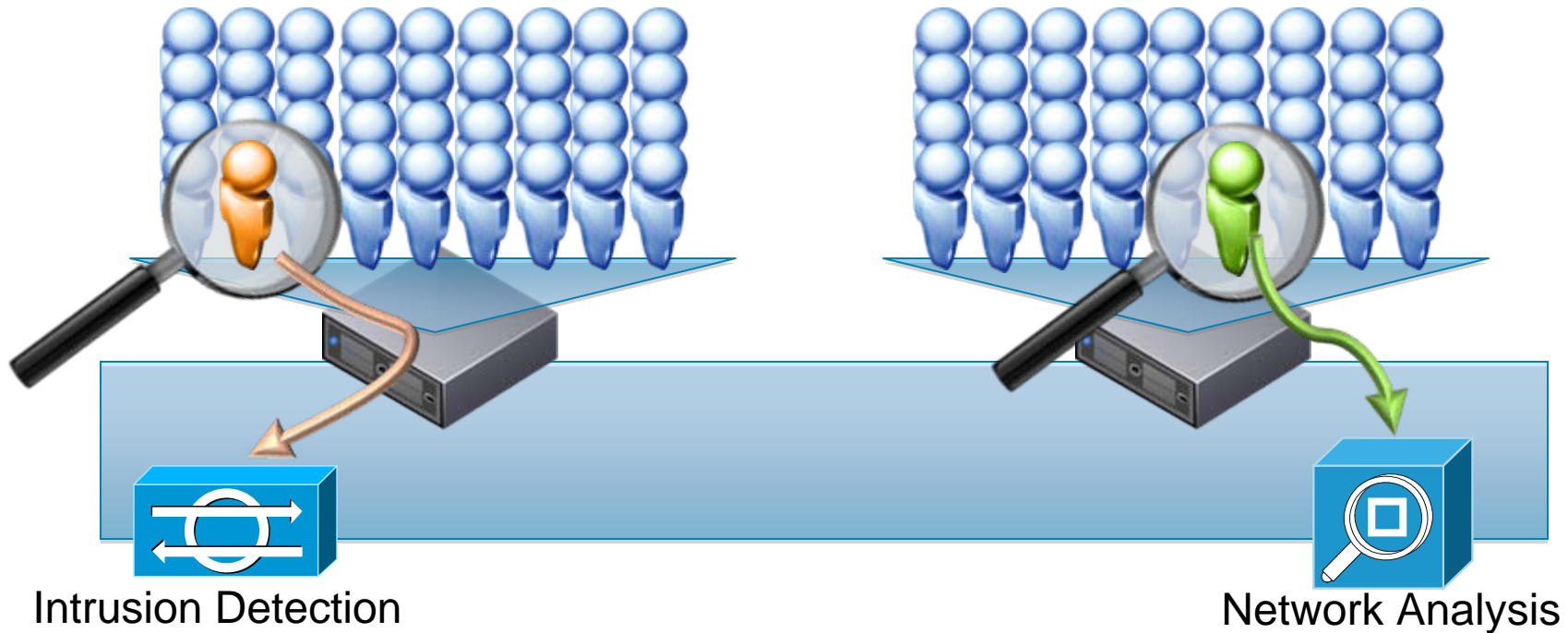
Data Center

# High Density VM Deployment

- How do you know if a VM has been corrupted and spreading virus to others?
- How do you secure and protect the different type of users and traffic



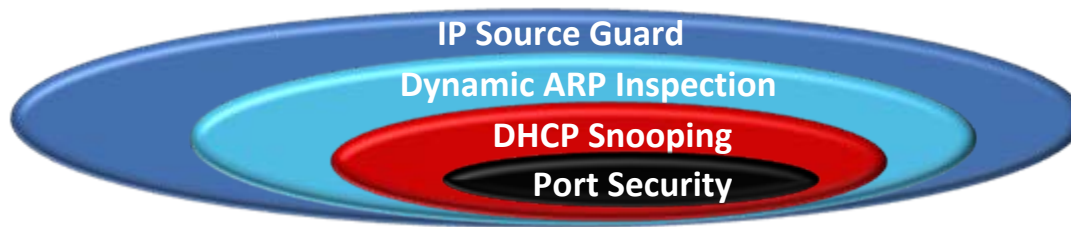
# Monitor a High Density VM Deployment with the Nexus 1000V



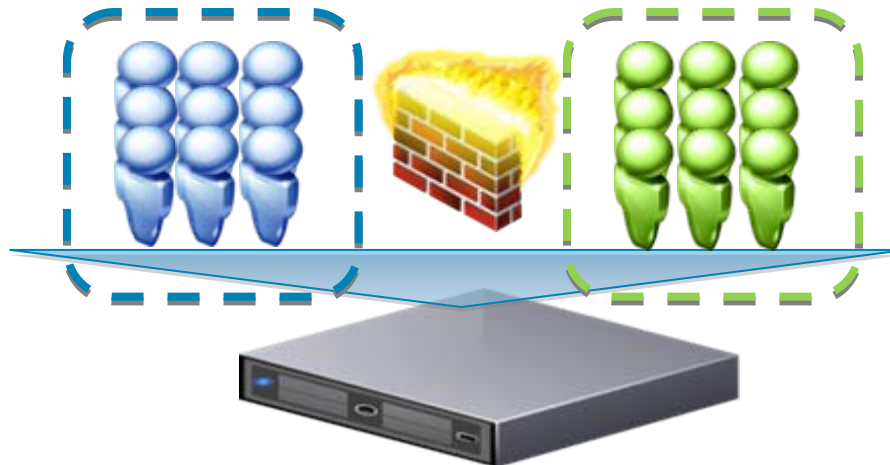
- **Select** individual VM traffic to review
- Redirect and monitor Traffic for further inspection using **ERSPAN**
- **Analyze** network traffic and export it to a collector using **NETFLOW**

# Secure a high-density VM Deployment with the Nexus 1000V

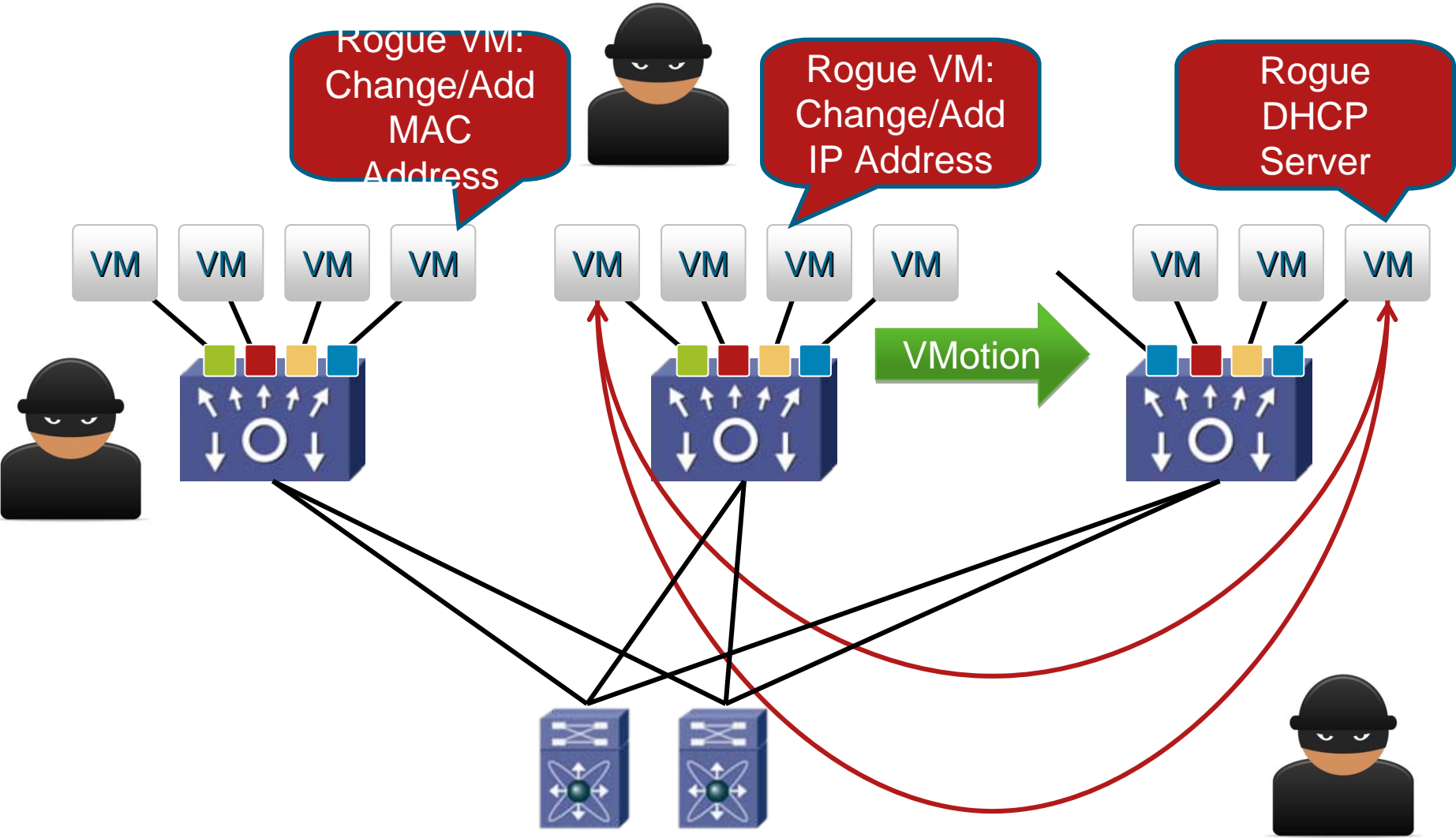
**Protect** the Virtual Infrastructure by deploying well-known tools that have been used before in the **Campus**



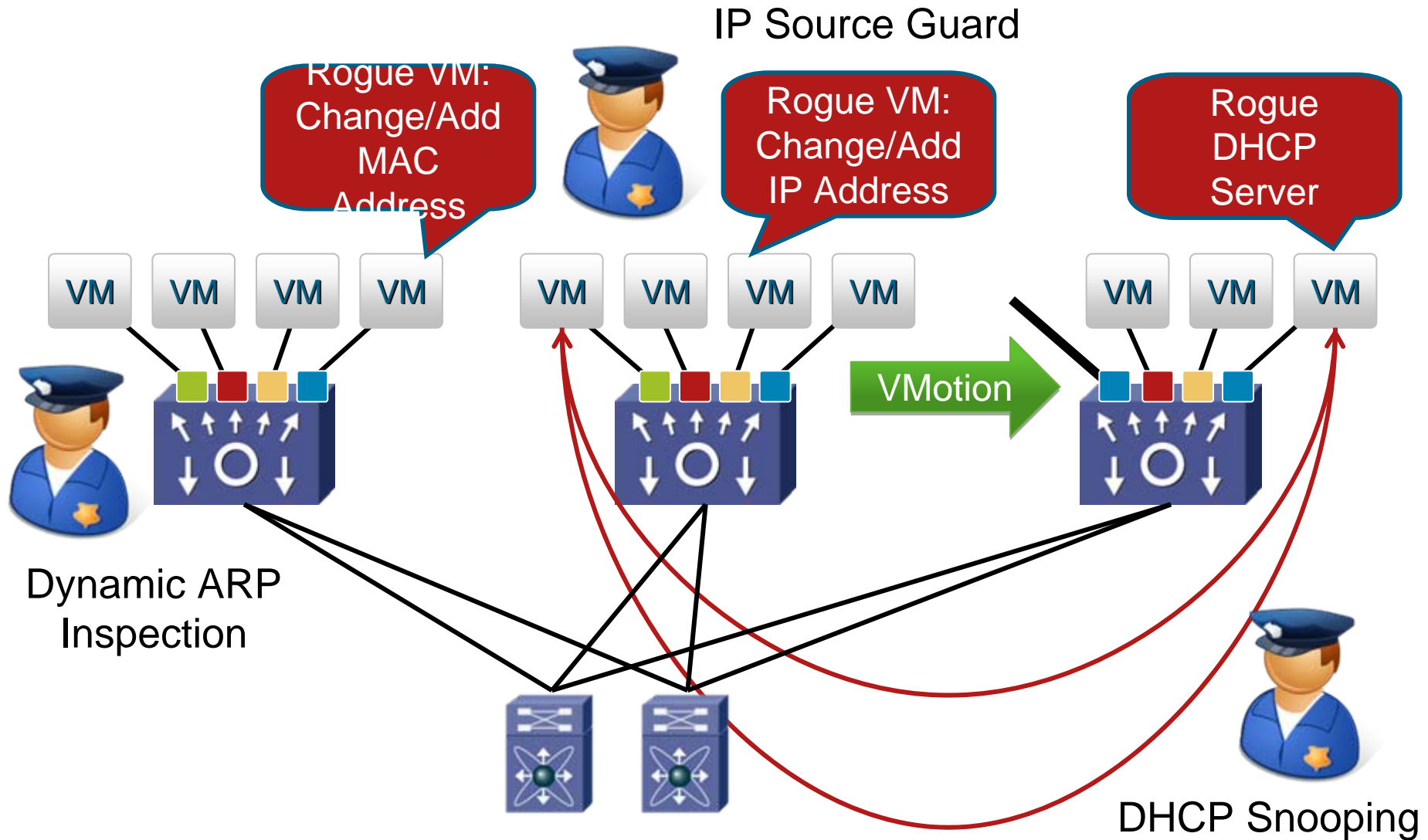
Deploy **Virtual Service Domain** to allow segregation and protection at the **organization level**



# Network Attacks



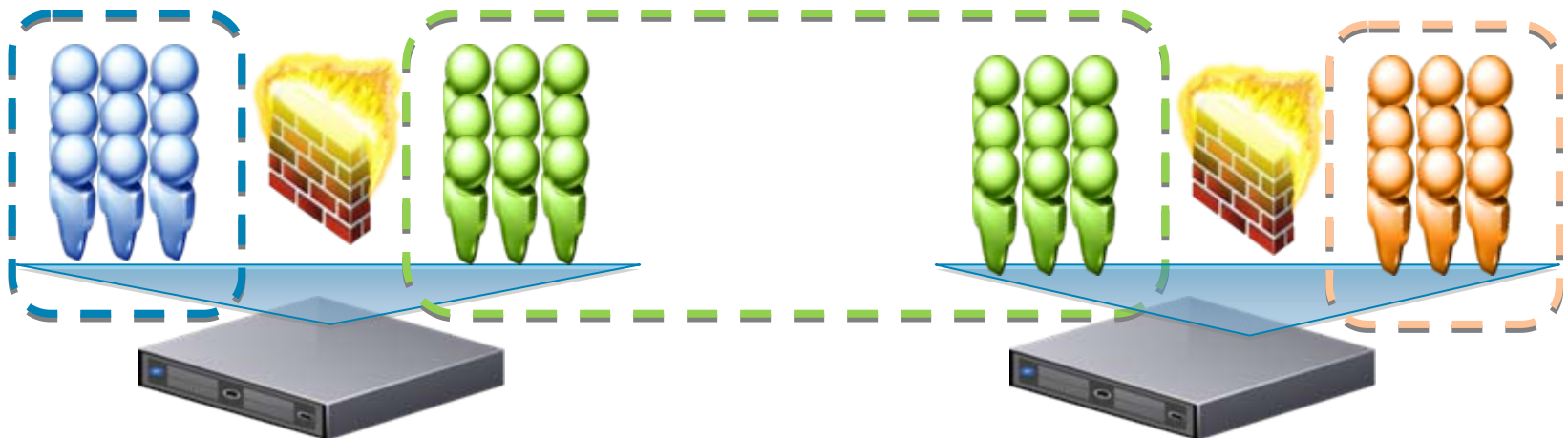
# Cisco Integrated Security Features Mitigates Network Attacks



# Virtual Service Domain

Monitor and enforce network traffic within the datacenter:

- Meet **corporate security** policies
- Ensure **regulatory compliance**
- Support **third party appliance** integration like **VShield**



# High-Density VM Deployment with the Nexus 1000V Demo

Nexus 1000V **manage and secure** seamlessly  
**300 VMs** running on **2 Unified Computing Systems Blade**



ARP Spoofing  
Man in the Middle Attack



DNS Interception  
DHCP Poisoning



**Demo** how a **Rogue VM** can be **stopped**  
using the **Nexus 1000V**





For more information visit:  
[www.cisco.com/go/vmworld09](http://www.cisco.com/go/vmworld09)



