

DEF CON 24 DEMO: Double Tagging VLAN Hopping Attack Against the Microsoft Server 2012 Hyper-V Cisco Nexus 1000v Virtual Network Using One Physical Switch

This post demonstrates the effects of using a double tagging VLAN hopping attack to send an ICMP packet to a virtual machine located on a separate VLAN than the physical attacking system. In this scenario the attacker is using a physical Kali 2.0 system connected to a native vlan access port on a Cisco 2950 switch and targeting a virtual machine located on a separate VLAN within the Microsoft Server 2012 Hyper-V hypervisor environment using the Cisco Nexus 1000v virtual network switch.

This experiment was performed on seven different hypervisor/virtual network configurations in order to perform a systematic evaluation of the effects across all of the major enterprise level virtualization platforms. The following network diagram illustrates the configuration used for each of the experiments:



The following video walks through the attack process and results.

DEF CON 24 DEMO: Double Tagging VLAN Hopping Attack Between Two Virtual Networks With a Cisco 2950 Switch in the Middle

This post demonstrates the effects of using a double tagging vlan hopping attack to send an ICMP packet from a virtual machine located in one hypervisor environment to another virtual machine located in a separate hypervisor environment connected to the same physical switch. In this scenario the attacker is using a virtual Kali 2.0 system located within the Citrix XenServer hypervisor environment and targeting a virtual machine located on a separate VLAN within the ProxMox hypervisor environment.

This experiment was performed on seven different hypervisor/virtual network configurations in order to perform a systematic evaluation of the effects across all of the major enterprise level virtualization platforms. The following network diagram illustrates the configuration used for each of the experiments:



The following video walks through the attack process and results.

DEF CON 24 DEMO: Switch Spoofing Attack Against a Cisco 2950 Switch from the VMWare ESXi 6.0 Hypervisor Environment

This post includes a demo video which illustrates the effects of a Switch Spoofing attack launched from within a virtualized networking environment. The experiment was performed on seven different hypervisor/virtual network configurations in order to perform a systematic evaluation of the effects across all of the major enterprise level virtualization platforms. The following network diagram illustrates the configuration used for each of the experiments:



The following video walks through the attack and results under VMWare ESXi 6.0 using the standard ESXi virtual switch.