REVCORD VOIP USER CONFIGURATION AND INFORMATION MANUAL

REVCORD

Contents

INTRODUCTION

This document is intended to provide assistance to our dealers and customers to prepare for a VoIP installation and to perform a Wireshark capture for VoIP calls for verification of the environment. Please note this is not for NG9-1-1, SIPREC, SIP INVITE, or BIB-type systems.

Software Requirements

1. Windows Server 2012 R2 or Windows 10 64-bit
2. User Account Control Settings (UAC) Disabled
3. Firewall and Antispyware Disabled for the Installation.
4. IIS Installed with ASP and ASP.net
5. The software requires a local Administrator account. The account credentials must be supplied to Revcord for Remote Connection and Installation.

Port Mirroring Requirements

1. Switch must be a managed switch
2. Switch must support VLAN
3. A Segmented VLAN should be used for all VoIP Traffic
4. Only Port mirror or span the Phone ports on the switch to the Revcord recorder. Do not mirror the port that is attached to the PBX
5. Auto-QoS is only for Phone traffic to and from the phone it will not help the VoIP recording quality.
6. You must use Policy Based Mirroring/Spanning (Please see Excerpt Below)
   a. **Policy Based Mirroring is required**
   b. A mirroring policy sends a copy of ingress, egress, or both ingress and egress packets that match the policy condition to a specific port. This type of policy may use any condition; the mirror policy action determines the type of traffic to mirror and the port on which the mirrored traffic is received. The policy action mirror command is used to configure mirror-to-port (MTP) action for the policy. For example, the following policy mirrors ingress packets to port 1/10: -> policy condition c1 source ip, policy action a1 mirror ingress 1/10, policy rule r1 condition c1 action a1, qos apply

7. When the above rule is activated, any flows coming into the switch from source IP address 192.168.20.1 are mirrored to port 1/10. It is also possible to combine the MTP action with other actions. For example: policy condition c1 source ip, policy action a1 mirror ingress 1/10 disposition drop, policy rule r1 condition c1 action a1,qos apply
8. This policy rule example combines the MTP action with the drop action. As a result, this rule drops ingress traffic with a source IP, but the mirrored traffic from this source is not dropped and is forwarded to port 1/10.

Wireshark Software

1. Configured switch with port mirroring and QoS
2. Port Mirror: Be sure that the phones on the switch are port mirrored to the port on the switch on which the recorder will be placed. Do not mirror the port that is used by the PBX.
3. The latest version of Wireshark is recommended. The latest can be downloaded from
4. http://wwwwireshark.org/download.html
5. Install Wireshark with default values. When Wireshark installs the winpcap driver, it may say that there is one installed already, that is not an issue and does not need to be reinstalled.
6. Below are different Display Filters for reference.

DISPLAY FILTER	EXPLANATION	EXAMPLE
eth.addr	source or destination mac-address	eth.addr == 00:1a:6b:ce:fc:bb
eth.src	source mac-address	eth.src == 00:1a:6b:ce:fc:bb
eth.dst	destination mac-address	eth.dst == 00:1a:6b:ce:fc:bb
arp.dst.hw_mac	target mac-address	arp.dst.hw_mac == 00:1a:6b:ce:fc:bb
arp.dst.proto_ipv4	target IPv4 address	arp.dst.proto_ipv4 == 10.10.10.10
arp.src.hw_mac	sender mac-address	arp.src.hw_mac == 00:1a:6b:ce:fc:bb
arp.src.proto_ipv4	sender IPv4 address	arp.src.proto_ipv4 == 10.10.10.10
vlan.id	vlan ID	vlan.id == 16
ip.addr	source or destination IPv4 address	addr
ip.dst	destination IPv4 address	ip.addr == 10.10.10.10

ip.src	source IPv4 address	ip.src == 10.10.10.10
ip.proto	IP protocol (decimal)	ip.proto == 1
ipv6.addr	source or destination IPv6 address	ipv6.addr == 2001::5
ipv6.src	source IPv6 address	ipv6.addr == 2001::5
ipv6.dst	destination IPv6 address	ipv6.dst == 2001::5
tcp.port	source or destination TCP port	tcp.port == 20
tcp.dstport	destination TCP port	tcp.dstport == 80
tcp.srcport	source TCP port	tcp.srcport == 60234
udp.port	source or destination UDP port	udp.port == 513
udp.dstport	destination UDP port	udp.dstport == 513
udp.srcport	source UDP port	udp.srcport == 40000
fr.dlci	Frame-Relay DLCI number	fr.dlci == 112
icmp.type	ICMP type code (decimal)	icmp.type == 8
vtp.vlan_info.vlan_name	VLAN name	vtp.vlan_info.vlan_name == TEST
bgp.originator_id	BGP id (IPv4 address)	bgp.originator_id == 192.168.10.15
bgp.next_hop	BGP Next Hop (IPv4 address)	bgp.next_hop == 192.168.10.15
rip.ip	RIP IPv4 address	rip.ip == 200.0.2.0
ospf.advrouter	OSPF advertising router ID	ospf.advrouter == 192.168.170.8
eigrp.as	EIGRP autonomous system number	eigrp.as == 100
hsrp.virt_ip	HSRP virtual IP address	hsrp.virt_ip == 192.168.23.250
vrrp.ip_addr	VRRP virtual IP address	vrrp.ip_addr == 192.168.23.250
zebra.dest4	ZEBRA destination IPv4 address	zebra.dest4 == 10.10.10.10
wlan.addr	source or destination MAC address	wlan.addr == 00:1a:6b:ce:fc:bb
wlan.sa	source MAC address	wlan.sa == 00:1a:6b:ce:fc:bb
wlan.da	destination MAC address	wlan.da == 00:1a:6b:ce:fc:bb