Cisco Remote Management Services Ports and Protocols

Cisco® Remote Management Services (RMS) enable you to simplify the adoption and management of Cisco technologies, maximize high performance, availability and use of Cisco solutions, and realize your return on technology investments faster with continuous monitoring and management of your network. Cisco experts provide extensive experience across a broad spectrum of technologies, including Business Video, Unified Communications, Data Center, Security, and Foundation products.

Cisco Remote Management Services uses a suite of applications and protocols to successfully deliver remote monitoring and management services. These applications and protocols must be permitted between the Cisco management appliance and all customer environments under management. Please make sure that all firewalls or other packet filtering devices allow this connectivity.

The following table lists the applications, their protocols and ports, direction, and which solution groups require them. Note that all listed ports and protocols are not necessarily applicable to all deployment models or services. Consult your service delivery engineer for a final listing of required ports and protocols.

Table 1. Application, protocols, and ports for Remote Management Services

Application	Protocol/Port	Direction		Solution Group				
		Source	Destination	Data Center	Business Video	UC/UCC	Security	Foundation
PING	ICMP Type 0,3,4,8,11	Cisco	Customer	X	X	X	X	X
Traceroute	33434+ max hops	Cisco	Customer	X	X	X	X	X
Telnet	TCP 23	Cisco	Customer	X	X	X	X	X
SSH	TCP 22	Cisco	Customer	X	X	X	X	X
RDP	TCP and UDP 3389	Cisco	Customer	X	X	X		X
SNMP Server	TCP and UDP 161	Cisco	Customer	X	X	X	X	X
SNMP Traps	UDP 162	Customer	Cisco	X	X	X	X	X
FTP	TCP 20 and 21	Both	Both	X	X	X	X	X
SFTP	TCP 22	Both	Both	X	X	X	X	X
Syslog	UDP 514	Customer	Cisco	X	X	X	X	X
Open VPN	TCP and UDP 1194	Cisco	Customer	X	X	X	X	X
HTTP	TCP 80:8080	Cisco	Customer	X	X	X		X
HTTPS	TCP 443:8443	Cisco	Customer	X	X	X	X	X
VI/vSphere Client	TCP 902 and 903	Cisco	Customer	X	X	X		
TACACS+	TCP 49	Customer	Cisco	X	X	X	X	X
IPMI	UDP 623	Cisco	Customer	X	X	X		
KVM over IP	TCP 2068	Cisco	Customer	X	X	X		
RTP	UDP 16384-32768	Cisco	Customer			X		

Application	Protocol/Port	Direction		Solution Group				
		Source	Destination	Data Center	Business Video	UC/UCC	Security	Foundation
SCCP	TCP 2000-2002	Cisco	Customer			X		
SIP	TCP or UDP 5060 and 5061	Cisco	Customer			X		
JDBC	SAP HANA Nodes TCP 3XX15*	Cisco	Customer	X				
HANA Web Services	SAP HANA Nodes TCP 5XX13*and 5XX14*	Cisco	Customer	X				

Firewall considerations for VPN

Placing a firewall between the remote site and Cisco headend crypto/IP GRE tunnel termination routers prevents visibility to specific applications because all traffic is encrypted. IPsec ESP protocol 50 and UDP port 500 for Internet Security and Key Management Protocol (ISAKMP) must be permitted and are the only packets visible to the firewall. Additionally, since Network Area translation (NAT) is used at the remote site, NAT-T (UDP port 4500) must be permitted as well as the source interface of the remote host (outside interface) and destination addresses of the headend router.

NAT Traversal (NAT-T)

IPsec NAT Traversal introduces support for IPsec traffic to travel through NAT or Port Area Translation (PAT) points in the network by encapsulating IPsec packets in a UDP wrapper, which allows the packets to travel through NAT devices. NAT Traversal was first introduced in Cisco IOS® version 12.2(13)T and is auto-detected by VPN devices. There are no configuration steps for a Cisco IOS router running this release or later. If both VPN devices are NAT-T capable and a NAT device lies in the crypto path, NAT Traversal is auto-detected and auto-negotiated.

*These ports are only required when SAP HANA service is purchased as part of Data Center monitoring. XX is the instance created upon the SAP HANA installation, usually 00.

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Printed in USA 10/13