Voice-over-Internet Protocol 101

VoIP Best Practices Table for LAN/WAN Network Configurations

Prepared by: Braun Mincher, PCG Telecom Consulting Group, Inc. • Revised: June 15, 2010

WIDE AREA NETWORK (WAN)

BEST	BETTER	GOOD	FAIR	POOR
Dedicated & Managed MPLS Connection for VoIP Phones	Dedicated T1, DS3, Fiber or FCC Licensed Wireless Internet Connection for VoIP Phones	Shared T1, DS3 or Fiber Internet Connection for VoIP Phones & Computers	Shared DSL or Cable Internet Connection for VoIP Phones & Computers	Satellite, Unlicensed Wireless or Consumer DSL Connection for VoIP Phones & Computers

LOCAL AREA NETWORK (LAN)

	BEST	BETTER	FAIR	POOR
ROUTER / FIREWALL	SIP Aware QoS Enabled Router with FXO Analog POTS Ports for Backup (Ex. Cisco, AdTran or Edgemarc)	SIP Aware QoS Enabled Router (Ex. Fortigate, Cisco, AdTran or Edgemarc)	Provider Uncertified or SIP Un-Aware Router	Inexpensive SIP Un-Aware Router (Ex. Linksys, Actiontec, etc.)
SWITCH	Managed Network Switch with Power over Ethernet (PoE), V-LAN Configured, and QoS Enabled on the LAN (Ex. Cisco, D-Link	Managed Network Switch with V-LAN Configured and QoS on the LAN, but not Power over Ethernet (PoE)	Managed Network Switch without V-LAN, Power over Ethernet (PoE) or QoS on the LAN	Unmanaged Network Switch or Hub without V-LAN, Power over Ethernet (PoE) or QoS on the LAN
WIRING	Dual Certified CAT5/6 Wiring Jacks to Separate VoIP and Computers	Single Shared Certified CAT5/6 Wiring Jacks for VoIP and Computers	Single Shared CAT5+ Wiring Jacks for VoIP and Computers	Single Uncertified CAT3 Wiring Jacks for VoIP and Computers

Note: The above information is general and not specific to any particular provider or platform. To a successful deployment of VoIP, customers are strongly advised to have a professional network assessment conducted, in advance, and to work with the IT staff and/or IT vendor to insure the proper network configuration.