

































Sample Network (Cont.)— POP Sizing				
Local POP Local PSTN FI/E1 VAN QoS V Cateway T1/E1 WAN				
POP Sizing	Assumptions:			
 Number of Gateways: 48 ports per AS5300*> Two AS5300s WAN Bandwidth: Bandwidth per call: 	 Voice or Fax calls Statistically there is silence on half the calls at any given time (use Voice Activity Detection) 			
66 bytes * 8 bits/byte * 50 pps = 26.4 kbps Total WAN bandwidth = 26 kbps * (96/2) calls [VAD provides 50% efficiency] = 1.27 Mbps * Up to 60 ports for an E1 scenario	 60 byte packets + link layer (no header compression) G.729 CODEC used With Higher Density DSPs, a single chassis will meet the needs 			
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Gateway Configuration—LA hostname la1-gw gateway 1 interface Loopback0 ip address 10.10.250.1 255.255.255.0 h323-gateway voip interface h323-gateway voip id gk-west ipaddr 10.10.254.10 1719 h323-gateway voip h323-id la1-gw h323-gateway voip tech-prefix 1# I interface Ethernet0 ip address 10.10.254.5 255.255.255.0 la1-gw.west #show gateway Gateway la1-gw is registered to Gatekeeper gk-west 406 1028_05F9_c4 © 1999, Cisco Systems, Inc. www.cisco.com 20

Gatekeeper Configuration—West					
	hostname gkl-west				
	interface EthernetU/U				
	standby 1 priority 110 < Active GateKeeper				
	standby 1 ip 10.10.254.10				
	gatekeeper				
	zone local gk-west acme.com 10.10.254.10				
	zone remote gk-hopoff acme.com 10.10.253.10 1719				
	zone remote gk-mwest acme.com 10.10.253.10 1719				
	zone subnet gk-west 10.10.250.0/24 enable				
	zone prefix gk-west 213*				
	zone prefix gk-hopoff *				
	gw-type-prefix 1#* default-technology				
	no shutdown				
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Originating Gatekeeper Debugs





























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RA	RADIUS Record Format					
A DESCRIPTION OF THE OWNER OF THE						
Attribute	Value	Description	Ī			
		RFCs 2139, 2139				
NAS-IP-Address	4	IP address in 4 hex octets (ASCII string)				
NAS-Port-Type	61	4 octets (used for MLPPP)	ļ			
User-Name	1	ASCII string field up to 63 octets	ļ			
Called-station-Id	30	1 or more octets (DNIS phone number, ASCII string)				
Calling-station-Id	31	1 or more octets (ANI phone number, ASCII string)				
Acct-Status-Type	40	4 octets (hex ASCII number)	ļ			
Service-Type	6	4 octets (hex ASCII number)	ļ			
Acct-Session-Id	44	"overloaded" for CDR - ASCII string up to 256 bytes	ļ			
Acct-Input-Octets	42	4 octets stop records only (hex number)	ļ			
Acct-Output-Octets	43	4 octets stop records only (hex number)	ļ			
Acct-Input-Packets	47	4 octets stop records only (hex number)	ļ			
Acct-Output- Packets	48	4 octets stop records only (hex number)				
Acct-Session-Time	46	4 octets (hex number rep. Seconds) stop records only	J			
Acct-Delay-Time	41	4 octets (hex number in seconds)	2			
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Overloaded Session ID

Field	Description
session id	The standard (RFC 2139) RADIUS account-session-id
call leg setup time	The Q.931 setup time for this connection in NTP format.
gateway id	The name of the underlying gateway. Name string is of form "gateway.domain_name"
connection id	A unique global identifier used to correlate call legs that belong to the same end-to-end call. The field consists of 4 long words (128 bits). Each long word is displayed in hexadecimal value and separated by a space character.
call origin	Indicates origin of the call relative to the gateway. Possible values are "originate" and "answer".
call type	Indicates call leg type. Possible values are: "Telephony" and "VoIP."
connect time	The Q.931 connect time for this call leg in NTP format. (stop only)
disconnect time	The Q.931 disconnect time for this call leg in NTP format. (stop only)
disconnect cause	Documented in Q.931 specification. Can be in the range of 1-160. (stop only)
remote IP address	IP address of the remote gateway used in this connection (stop only)
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