

Cisco UCM 6.x SIP to AT&T SIP with Acme Packet 3000-4000 SBC

A Technical Application Note





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Emergency 911/E911 Services Limitations

While AT&T IP Flexible Reach services support E911/911 calling capabilities in certain circumstances, there are significant limitations on how these capabilities are delivered. Please review the AT&T IP Flexible Reach Service Guide in detail to understand these limitations and restrictions.

Specific IP endpoints Support

Specific IP endpoints are supported with IP Flex Reach. These endpoints must support SCCP and NTE. The Cisco IP endpoints that support SCCP and NTE are:

VG224

7902, 7905, 7911, 7912, 7931, 7937, 7940, 7941, 7942, 7945, 7960, 7961, 7962, 7965, 7970, 7971, 7975

Future new phone models

The Cisco IP endpoints that do NOT support NTE and thus are NOT supported with IP Flex Reach are: 7910, 7920, 7935, 7936

VG248

DPA-7610, DPA-7630

Please refer to the following Cisco website for further information.

http://www.cisco.com/en/US/docs/voice ip comm/cucm/srnd/6x/media.html#wp1055031

HIPCS is not supported with Cisco Unified Communication Manager

If the customer is in a HIPCS serving area, Cisco Unified Communication Manager SIP is not supported. Please consult with your customer care or sales person to determine if you are in a HIPCS serving area.

AT&T IP Teleconferencing Service is not supported when G.729 is configured on Cisco Unified Communication Manager

Cisco Unified Communication Manager only supports a single codec on an IP trunk. Since the AT&T IP Teleconferencing (IPTC) Service supports G.711, a Cisco Unified Communication Manager configured for G.729 will not work with the IPTC service.

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Abstract

This technical application note defines a SIP configuration model suitable for the Oracle Communications Session Border Controllers connecting SIP Trunks from Cisco Unified Communications Manager (UCM) to AT&T's IP Flex Reach service. The reference configuration presented was tested in AT&T's lab.

Introduction

This Oracle technical application note outlines the recommended configuration for the Acme Packet 3000/4000 series Session Border Controllers, the industry leading Session Border Controllers, for connecting SIP Trunks from Cisco UCM 6.x SIP to AT&T's IP Flex Reach service. This document is based on Acme Packet OS version C5.1.0 but is applicable to images 4.x and higher.

Many enterprise customers with installed Cisco Unified Call Manager (UCM) are migrating from 4.x to 6.x and are exploring the new features such as SIP signaling on the trunk side instead of the legacy H.323 protocol. This provides for a homogenous VoIP protocol moving forward which is needed for delivering the next wave of Unified Communications across the entire business. Moving from H.323 to SIP also eases the support burden and complexities involved with supporting multiple signaling protocols.

SIP to SIP Trunking traffic with UCM 6.x is a common migration strategy for most enterprise UCM customers previously supporting H.323 UCM platforms. Both protocols can be supported simultaneously on the Oracle Communications Session Border Controller. Refer to [3] for details on UCM H.323 to SIP support on the Oracle Communications Session Border Controller.

An AT&T SIP Trunk with PRACK (RFC 3262) is utilized to ensure the media session is established before the call is connected. This eliminates the need for MTP resources on the UCM and eliminates the clipping that sometimes accompanies the lack of SDP Early Offer.

Intended Audience

This document is intended for use by Oracle Systems Engineers, third party Systems Integrators, and end-users of the Session Border Controllers. It assumes that the reader is familiar with basic operations of the Session Border Controller, and it is STRONGLY RECOMMENDED that the reader has attended the following training courses (or can demonstrate equivalent experience):

- Y EDU-CAB-C-CLI: Oracle Communications Session Border Controller Configuration Basics
- Y EDU-TS1-OE: Oracle Communications Session Border Controller Troubleshooting Level 1

Support

Cisco Call Manager Guide is located at the following AT&T URL: http://www.corp.att.com/dna/support/

**The AT&T website is password protected. The ID and Password are provided to each customer when they place an order for IP Flexible Reach or IP Toll Free service.

Design Goals

The reference configuration represents the most common Cisco UCM (Cisco Call Manager) deployment model: UCM originating SIP traffic and terminating to a SIP provider via the Oracle Communications Session Border Controller. The config also supports bi-directional call-flows via Local-Policy routes.

This document will annotate each configuration with information on its general applicability. The intent is to:

- Minimize UCM SIP interoperability issue's by standardizing field configurations
- Provide guidelines for new users for the Session Border Controller
- Provide a configuration template, baselining the SIP to SIP configuration (with accompanying diagram)
- Flexibility: how resilient the configuration is and how adaptable the configuration is when turning up new UCM 6.x SIP to SIP networks
- Performance: minimize the use of unnecessary configuration objects

SIP Peering Scenario for UCM 6.x

This section includes a reference architecture diagram, where the Session Border Controller is integrated as an Enterprise CPE Trunking Session Border Controller, performing SIP between the Enterprise (UCM) and the AT&T SIP Trunk supporting PRACK. This reference architecture must be confirmed or modified by the customer according to the specific project requirements.

The Enterprise SIP UCM cluster peers with the long distance provider via the Oracle Communications Session Border Controller. Below is the network diagram and representative call-flow.

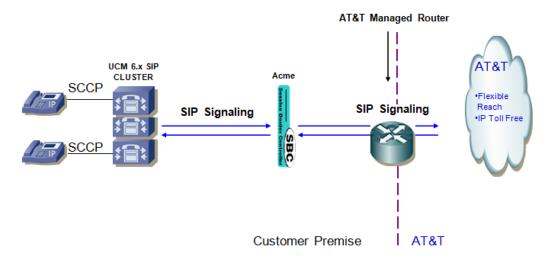


Diagram 1: Enterprise UCM SIP to AT&T SIP Trunk via Oracle Communications Session Border Controller

Cisco UCM 6.1 SIP w/PRACK Call Setup via Acme SBC

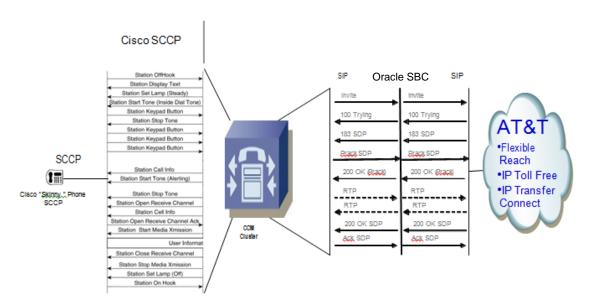


Diagram 2: Call-Flow for Enterprise UCM SIP to AT&T SIP Trunk via Oracle Communications Session Border Controller

Notes on Reference Configuration

The Enterprise UCM cluster is configured for SIP Trunking and acts as a gateway. The Oracle Communications Session Border Controller is configured to perform SIP peering between the Enterprise and AT&T's network.

The realm labeled *enterprise-core* and its corresponding sip-interface (address 10.10.10.100) is where the SIP signaling and RTP will enter/exit the SBC. The Enterprise UCM needs to signal to this target IP address.

The realm labeled *peer* and its corresponding sip-interface (address 192.168.1.100) is where the SIP signaling and RTP will enter/exit the SBC to/from the Long Distance SIP Provider.

The Local-Policy configurations route sessions to/from the Enterprise UCM to the Long Distance SIP Provider.

SIP Peering Configuration Oracle enterprise-core peer SBC Physical Interface: Physical Interface: 192.168.1.200 SIP SIP Signaling Signaling Network Interface: Network Interface: 10.10.10.200 192.168.1.100 10.10.10.100 AT&T SIP Interface: SIP Interface: 192.168.1.100 10.10.10.100 UCM 6.1 SIP -Flexible Reach :日: -IP Toll Free Steering Pool Steering Pool 10.10.10.201 Media/RTP Media/RTP RTP RTP 10.10.10.100 192,168,1,100 Local-Policy: Routes Calls from UCM CLUSTER to AT&T Local-Policy: Routes Calls from AT&T to UCM CLUSTER

Diagram 3: Network Diagram for Reference Configuration

Normative References

- [1] Acme Packet, "Net-Net 4000 S-C6.1.0 ACLI Configuration Guide", 400-0061-61, Jan 2009.
- [2] Timmons, P., "BCP Peering Configuration 4.0.0 and later", 520-0014-01, May 2007
- [3] Walker, C., "Cisco UCM 4.x H323 Interworking to ATT SIP with Net-Net 3000-4000 Series SD Application Note", 510-0015-00, July 2009

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Appendix A: Reference Configuration

```
Acme Packet # show run local-
policy
            from-address
            to-address
            source-realm
                                           peer
            activate-time
                                           N/A
            deactivate-time
                                           N/A
                                           enabled
            state
            policy-priority
                                           none
            policy-attribute
                       next-hop
                                                   SAG:Enterprise
                       realm
                                                   enterprise-core-ccm
                       action
                       terminate-recursion disabled
                       carrier
                                                   0000
                       start-time
                       end-time
                                                   2400
                                                   U-S
                       days-of-week
                       cost
                                                   0
                       app-protocol
                                                   SIP
                                                   enabled
                       state
                       media-profiles
 local-policy
            from-address
            to-address
            source-realm
                                           enterprise-core-ccm
            activate-time
                                           N/A
            deactivate-time
                                           N/A
                                           enabled
                                           none policy-attribute
            policy-priority
                                                   SAG:ATT
                       next-hop
                       realm
                                                   peer
                       action
                                                   none
                       terminate-recursion disabled
                       carrier
                       start-time
                                                   0000
                       end-time
                                                   2400
                       days-of-week
                                                   U-S
                                                   0
                       cost
                                                   SIP
                       app-protocol
                       state
                                                   enabled
                       media-profiles
 media-manager
         state
                                                     enabled
         latching
                                                     disabled
                                                     86400
         flow-time-limit
         initial-guard-timer
                                                     43200
         subsq-guard-timer
                                                     43200
         tcp-flow-time-limit
                                                     86400
         tcp-initial-guard-timer
                                                     300
```

```
tcp-subsq-guard-timer
                                                   300
        tcp-number-of-ports-per-flow
                                                   2
        hnt-rtcp
                                                   disabled
                                                   NOTICE
        algd-log-level
        mbcd-log-level
                                                   NOTICE
        red-flow-port
                                                    1985
        red-mgcp-port
                                                   1986
        red-max-trans
                                                   10000
        red-sync-start-time
                                                   5000
        red-sync-comp-time
                                                   1000
        media-policing
                                                   enabled
        max-signaling-bandwidth
                                                   10000000
        max-untrusted-signaling
                                                    100
        min-untrusted-signaling
                                                   30
        app-signaling-bandwidth
                                                   0
                                                   30
        tolerance-window
        rtcp-rate-limit
                                                   0
        min-media-allocation
                                                   32000
        min-trusted-allocation
                                                    1000
        deny-allocation
                                                    1000
                                                   disabled
        anonymous-sdp
        arp-msg-bandwidth
                                                   32000
        fragment-msg-bandwidth
        rfc2833-timestamp
                                                    enabled
                                                    100
        default-2833-duration
        rfc2833-end-pkts-only-for-non-sig disabled
        translate-non-rfc2833-event
                                                    disabled
network-interface
                                                      M00
           sub-port-id
           description
                                                      AT&T/Peer Facing
           hostname
           ip-address
                                                      192.168.1.100
           pri-utility-addr
                                                      192.168.1.101
           sec-utility-addr
                                                      192.168.1.102
           netmask
                                                      255.255.255.0
                                                      192.168.1.1
           gateway
           sec-gateway
           gw-heartbeat
                      state
                                                                  disabled
                      heartbeat
                                                                  a
                      retry-count
                                                                  0
                      retry-timeout
                                                                  1
                      health-score
                                                                  0
           dns-ip-primary
           dns-ip-backup1
           dns-ip-backup2
           dns-domain
           dns-timeout
                                                      11
                                                      192.168.1.100
           hip-ip-list
           ftp-address
           icmp-address
           snmp-address
           telnet-address
network-interface
```

```
M10
          name
          sub-port-id
                                                       a
          description
                                                       Enterprise/Core Facing
          hostname
          ip-address
                                                       10.10.10.100
          pri-utility-addr
                                                       10.10.10.101
          sec-utility-addr
                                                       10.10.10.102
                                                       255.255.255.0
          netmask
                                                       10.10.10.1
          gateway
          sec-gateway
          gw-heartbeat
                                                                  disabled
                     state
                     heartbeat
                                                                   0
                     retry-count
                                                                   0
                     retry-timeout
                                                                   1
                                                                   0
                     health-score
          dns-ip-primary
          dns-ip-backup1
          dns-ip-backup2
          dns-domain
          dns-timeout
                                                       11
          hip-ip-list
                                                       10.10.10.100
          ftp-address
          icmp-address
                                                       10.10.10.100
          snmp-address
          telnet-address
phy-interface
                                                 M00
        name
        operation-type
                                                 Media
        pert
                                                 О
        slot
        virtual-mac
        admin-state
                                                 enabled
        auto-negotiation
                                                 enabled
        duplex-mode
        speed
phy-interface
                                                 M10
       name
        operation-type
                                                 Media
        gost
                                                 0
        slot
                                                  1
        virtual-mac
                                                 enabled
        admin-state
        auto-negotiation
                                                 enabled
        duplex-mode
       speed
realm-config
                                                    peer
           identifier
          addr-prefix
                                                    0.0.0.0
          network-interfaces
                                                    M00:0
          mm-in-realm
                                                    enabled
          mm-in-network
                                                    enabled
          mm-same-ip
                                                    enabled
```

enabled

```
mm-in-system
                                                      disabled
           bw-cac-non-mn
                                                      disabled
           msm-release.
                                                      disabled
           qos-enable
           max-bandwidth
           ext-policy-syr.
           max-latency.
                                                      9
           max-jitter
           max-packet-loss
                                                      в
           observ-window-size
                                                      9
           pacent-cealm
           dos-realm
           media-policy
           in-translationid
           out-translationid in-
           manipulationid out-
           manipulationid class-
           profile
           average-nate-limit
           access-control-trust-level invalid-signal-
           threshold
           maximum-signal-threshold
           untrusted-signal-threshold
                                                      9
           deny.period
                                                      30
                                                      disabled
           symmetric-latching
                                                      disabled
           pai-strip
           trunk-context
           early-media-allow
           additional-prefixes
           restricted-latching
                                                      none
           restriction-mask.
                                                      32
           accounting-enable
                                                      enabled
           usen-cac-mode
                                                      none
           user-cac-bandwidth
                                                      9
                                                      9
           user-cac-sessions
                                                      disabled
           net-management-control
                                                      disabled
           delay-media-update
realm-config
           identifier
                                                      enterprise-core-com
           addc.prefix
                                                      0.0.0.0
           network-interfaces
                                                       M10:0
                                                      enabled
           mmainarealm
                                                      enabled
           mm-in-petwork
                                                      enabled
           mm-same-ip
                                                      enabled
           mmainasystem
           bw.cac.non.m
                                                      disabled
           msm-release
                                                      disabled
                                                      disabled
           gos-enable
           max-bandwidth
           ext-policy-syr.
                                                      Θ
           max-latency.
           max-jittec
                                                      9
           max-packet-loss
                                                      9
           observawindowasize
                                                      9
           pacent-cealm
```

```
dos-realm media-policy
           in-translationid out-
           translationid in-
           manipulationid out-
           manipulationid class-
           profile
           average-nate-limit
                                                      9
           access-control-trust-level
           invalid-signal-threshold
           maximum-signal-threshold
                                                      0
           untrusted-signal-threshold
                                                      9
                                                      30
           deny-period
                                                      disabled
           symmetric-latching
                                                      disabled
           gaitstrig
           trunk-context
           early-media-allow
           additional-prefixes
           restricted-latching
                                                      none
           restriction-mask
                                                      32
                                                      enabled
           accounting-enable
           usen-cac-mode
                                                      none
           user-cac-bandwidth
                                                      0
           user-cac-sessions
                                                      disabled
           net-management-control
                                                      disabled
           delay-media-update
session-agent
           bostname
                                                          192.168.1.200
           ip.address.
                                                          5060
           pact
           state
                                                          enabled
           app-protocol
                                                          SIP
           app-type
                                                          UDP
           transport-method
           cealmoid
                                                          peer
           description
                                                          AT&T Session Agent Primary
           sarriers
                                                          enabled
           allow-next-hop-lp
                                                          enabled
           constraints.
                                                          9
           max-sessions
           max-inbound-sessions
                                                          9
           max-outbound-sessions
                                                          9
           maxaburstarate
                                                          9
           max-inbound-burst-rate
           maxaouthoundabucstarate
                                                          9
           max-sustain-cate
                                                          9
                                                          Θ
           max-inbound-sustain-rate
           max-outbound-sustain-rate
                                                          9
                                                          5
           min-seizures.
           min-asc.
                                                          9
           time-to-resume
                                                          9
           ttr-no-response.
                                                          300
           in-service-period
                                                          0
           burst-rate-window
                                                          Θ
                                                          9
           sustain=nate=window
                                                          None
           requiriscanniensmode.
```

enabled loose-routing enabled send-media-session response-map. ping_method OPTIONS:hops=0 300 ping-interval ging-in-service-response-codes out-serviceresponse-codes media-profiles in-translationid out-translationid trust-me enabled requestauricheaders. stop-recurse local-response-map pingatoauserapact ping-from-user-part disabled listrustame. in-manipulationid outmanipulationid p-assertedid trunk-group maxacegisterasustainacate early-media-allow invalidate-registrations disabled rfc2833-mode none rfc2833-payload 0 codec-policy session-agent bostname 192.168.1.201 ip.address. 5060 pact enabled atate app-protocol SIP app-type UDP transport-method realmoid peer AT&T Session Agent Secondary carriers description allow-next-hop-lp enabled enabled sonstraints max-sessions Θ max-inbound-sessions. max-outbound-sessions 9 maxaburatarate ø Θ max-inbound-burst-rate max-outbound-burst-rate 9 Θ max-sustain-rate max-inbound-sustain-rate 9 max-outbound-sustain-cate 9 min-seizuces 5 min-asc 0 timestoscesume Θ 300 ttc-no-cesponse. in-service-period 0

proxy-mode redirect-action

9

burst-rate-window 9 sustain-rate-window regauriacarrieramode None proxy-mode redirect_action enabled loose-routing send-media-session enabled response-map. ping-method OPTIONS:hops=0 300 ging-interval ping.in-service.response.codes out-service-response-codes. media-profiles intranslationid out-translationid trust-me enabled requestauriaheaders. ster-recurse local-response-map pingatoauserapart pingfrom-user-part disabled listrustame. in-manipulationid outmanipulationid p-assertedid trunk-group maxaregisterasustainarate 0 early-media-allow invalidate-registrations disabled nfic2833-mode. none rfc2833-payload codec-policy session-agent 10.10.10.200 hostname. ipaaddress. pact 5060 enabled atate SIP app-protocol apputype transport-method UDP cealm-id Enterprise SIP UCM Primary carriers description allow-next-boo-lo enabled constraints. disabled max-sessions max-inbound-sessions 9 max-outbound-sessions. max-burst-rate 9 max-inbound-burst-rate Θ max-outbound-burst-rate 9 max-sustain-cate Θ max-inbound-sustain-cate а Θ max-outbound-sustain-rate 5 min-seizures 9 min-asc.

time-to-resume Θ 0 ttc-no-cesponse 9 in-service-period 9 burst-rate-window sustain-rate-window requuri-carrier-mode None proxy-mode redirect_action loose-routing enabled enabled send-media-session response-map ping-method OPTIONS:hops=0 300 ping-interval ping-in-service-response-codes out-service-response-codes media-profiles in-translationid out-translationid di sabled trustame: request-uri-beaders stoprecurse. local-response-map pingstosuserspart pingfrom-user-part disabled liatrustame. in-manipulationid out-manipulationid g-asserted-id trunk-group а max-register-sustain-rate early-media-allow invalidate-registrations disabled nfic2833-mode. none rfc2833-payload codec-policy session-agent 10.10.10.201 bostname ipaaddress. gart 5060 enabled state SIP app-protocol app.type transport-method UDP realm-id Enterprise SIP UCM Secondary description. carriers allow-next-bop-lp enabled constraints. disabled max-sessions max-inbound-sessions 9 max-outbound-sessions 0 max-burst-rate Θ max-inbound-burst-rate max-outbound-burst-rate Θ max-sustain-cate 9 max-inbound-sustain-rate 0

max-outbound-sustain-rate Θ 5 min-seizures 0 mintasc timestoscesume 9 ttr-no-response. 9 in-service-period 9 burst-rate-window 9 9 sustain-nate-window requuni-carrier-mode. None proxy-mode redirect-action enabled loose-routing enabled send-media-session response-map QPTIONS:hops=0 ging-method ping-interval 300 ping-in-service-response-codes out-service-response-codes media-profiles in-translationid outtranslationid disabled trust-me request-uri-beaders stoprecurse. local-response-map ping-touser-part ping-from-userpart disabled listrustame. in-manipulationid out-manipulationid passerted-id trunk-group Θ max-register-sustain-rate early-media-allow disabled invalidate-registrations rfc2833-mode none nfc2833-payload codec-policy. session-group group-name. ATT description. enabled state SIP app-protocol RoundRobin strategy dest 192.168.1.200 192.168.1.201 trunk-group enabled sag-recursion 401,407 stop-sag-recurse session-group group-name. Enterprise description state enabled app-protocol SIP

	atrategy.	RoundRobin
	dest	
		10.10.10.200
		10.10.10.201
	tounk-group	
	sag-recursion	disabled
	stopasagapecurse	401,407
sip.c	onfig	
0.00.00	state	enabled
	operation-mode	dialog
	dialogatransparency home-realmaid	enabled peer
	egcessacealmaid natamade	enterprise-core- <mark>ccm</mark> Public
	registran-domain	
	registran-bost registran-port	0
	register-service-route init-timer	always 500
	max-timer	4000
	transtexpire inviterexpire	32 180
	inactive-dynamic-conn enforcement-profile pas- method	32
	pac-interval pac-strategy	10 PropDist
	pac-load-weight pac-session-weight	1 1
	pac-coute-weight	1
	pac-callid-lifetime pac-user-lifetime	600 3600
	red-sip-port red-max-trans	1988 10000
	cedasyncastactatime	5000
	redasyncacompatime addareasonabeader	1000 disabled
	sip-message-leo eoum-sag-match	0 disabled
	extra=method=stats	disabled
	cph-feature Osep-user-sessions-rate	disabled 0
	registration=rache=limit options	<pre>0 add-groy-to-tag=no insert-arg-header max- udg-length=0 set-inv-exp-at-100-resp</pre>
sip-i	nterface	
	state	enabled
	cealmaid	peer
	description sip-port	
	addcess.	192.168.1.100
	pact	5060
	transport.protocol	UDP

tls-profile			
allow-anonymous carriers			agents-only
transcexpire invite-expire		0 0	
max-redirect-contacts		9	
proxy-mode redirect-action			
contact-mode nat-traversal	none none		
pat-interval		30	
top-pat-interval registration-caching	disabled	30	
mio-reg-expire registration-interval	3600	300	
coutestoscegistrac	disabled		
secured-network teluri-scheme, uri-fgdn-domain	disabled	disabled	ı
trust-mode	all		
maxa nat ainterval	3600		
oat-int-increment nat-test-increment		10 30	
sip-dynamic-bot stop-recurse	disabled 401,407		
poctamapastact		9	
poct-map-end in-manipulationid		0	
out-manipulationid sip-ims-feature operator-identifier	Privacy	disabled	l
anonymous-priority max-incoming-conns	none	9	
per-sec-ip-max-incoming-conos inactive-conn-timeout	0	9	
untrusted-conn-timeout		9	
network-id ext-policy-server default-loca charging-vector-mode none address-mode none ccf-address ecf-address	tion-string charging-fu	nction-	
tecmatgcpamode	none		
implicit_service_route	disabled		
cfc2833.payload	+	101	
rfc2833:mode constraint:name response-map local:response:map enforcement-profile	transparen		
refer-call-transfer route-unauthorized-calls	disabled		
tcp-keepalive add-adp-invite add-adp-profiles	none	disabled	

```
sip-interface
                                        enabled
        atate
        realmaid
                                                    enterprise-core-ccm
        description
        sip-pert
                 address.
                                                                 10.10.10.100
                                                             5969
                 gort.
                 transport-protocol
                                                            UDP
                 tls-profile
                                                            all
                 allow-anonymous.
        carriers
        trans_expire
        invite-expire
                                                    9
        max-redirect-contacts
                                                    Θ
        proxy_mode redirect-action
        contact-mode
                                        none
        nat-traversal
                                        none
        <u>nat-interval</u>
                                                    30
                                                    98
        tcp-nat-interval
                                        disabled
        registration-caching
                                                    388
        min-reg-expire
                                        3600
        registration-interval
                                        disabled
        coute-to-registrar
                                        disabled
        secured-network
                                        disabled
        teluni-scheme
        uci-fodo-domaio
                                        all
        trust-mode
                                        3699
        max-nat-interval
        nat-int-increment
                                                    18
        nat-test-increment
                                                    30
                                        disabled
        sip-dynamic-bot
                                        401,407
        stop_recurse
        port-map-start
                                                    9
        port-map-end
        in-manipulationid
        out-manipulationid
                                        Privacy
        sip-ims-feature
                                                    disabled
        operator-identifier
        anonymous_priority
                                        none
        max-incoming-conns.
        per-arc-ip-max-incoming-conns 0
        inactive-conn-timeout
                                                    Θ
        untrusted-conn-timeout
        network-id
        ext-policy-server
        default-location-string
        charging-vector-mode pass charging-function-
        address-mode pass ccf-address
        ecf.address.
        term-term-mode
                                        disabled
        implicit-service-route
                                                    101
        rfc2833-payload
        rfc2833-mode.
                                                    transparent
        constraint-name
        response-map.
```

localaresponsea enforcement-pro cefecacallatcan	file	disabled	
route-unauthori		01540160	
tcp-keepaliye	200-00115	none	
add-sdp-invite		disabled	
add-sdp-profile	S.		
sip-manipulation			
Dawe STRINGOTERNESSES		Privacy	
description		changing ip	
beadec-cule			
Dame.			Header
beader: action		mani	serted-Identity pulate
	isonatype	case	-sensitive
matchev magnitus	æ	any	
newswal methods	ue , element-rule		
	oame pacametectoame		PAI_Local_IR
	type		uri-host replace
	action match-val-type		any
	compacison-type		case-sensitive
	matsh.value		
beader-rule	new-value		\$LOCAL_IP
DAME.		PRI_	Headec
beadec.	name.		eferred-Identity
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match.v	*******		-sensitive
msg-typ		any	
news.val methods	we , element-rule ภลภล		PPI Local IP
	pacameter=name		***************************************
	type action		uri-host replace
	<pre>match-val-type comparison-type match-value</pre>		any case-sensitive
	new-walue		\$LOCAL_IP
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oame beader:	coame.	From	
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		DADE		Ecom_header
		pacametec.come		
		\$X.B8		yri-host
		action match-val-type		replace any
		companison-type		case-sensitive
		match=value new=value		\$LOCAL_IP
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	beader	зале.	То	
	action.		manipu	late
		ean-txee	case-se	ensitive
	match-va			_
	osety.e		reques	t
	newaxalı methods			
	element:			
		parameter-name		Jo_header
		type.		uri-host
		action		replace
		match-val-type		any
		compacisonatype matshavalue		case-sensitive
		new-xalue		\$REMOTE_IP
beadec:			DDT He	-4
	name		BRI_He	
	beader-name action		Remote-Party-ID manipulate	
		son-type	case-s	ensitive
	match-va		any	
	magatyn newayalı		ally	
	methods	element-rule		
		parameter:name		RRI_header
		type action		uri-host replace
		match-val-type		any
		compacisonatype matchayalue		case-sensitive
headen:	rule	news.value		\$LOCAL_IP
***************************************	name.		Refer	header.
	beader	name	Referr	
	action		manipu	
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	new-valu	ie.	-	
	methods	element-rule		
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		parameter.come		
		type		uri-host

	action		replace
	match.val.tvpe comparison.tvpe match-value		any case-sensitive
	new-walue.		\$LOCAL_IP
header-rule			
nane. head	ecapame	Referre Refer-T	
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	arison-type h-value	case-se	nsitive
	type yalye methods ent-rule	any	
	nane.		cefectobdc
	parameter-name		
	type.		yri-host
	action match <u>-val</u> -type		replace any
	comparison-type		case-sensitive
	match.value new-value		\$REMOTE IP
	0000.300000		\$10.012_E1
header-rule			
name.		Contact	Hdc.
bead actio	econame RO	Contact manipul	
	acisonatype hayalwe	case-se	nsitive
#Sgat		any	
ORW-:	kalue gdg element-rule		
895.600	name name		ContactHostReplace
	parameter-pame		***************************************
	type. action		uri-host replace
	match_val_type comparison-type match-value		any case-sensitive
	pew-value		\$LOCAL_IP
steering-pool			
ip-address	į	192.168	1.100
stact-port	<u> </u>	16384	
end-port realmoid		32767 peer	
network-in	terface.		
steering-pool			
ip-address start-port		10.10.10.100 16384	
end-pact.		32767	
realmaid network-in	nterface	enterprise-co	re-SSD

system-config

bostname Enterprise Enterprise-SD description location mib-system-contact mibsystem-name mib-system-location enabled somp_enabled disabled enable-somp-auth-traps enable-somp-sysleg-notify enabled enable-snmp-monitor-traps enabled enable-env-monitor-traps disabled somp-syslog-his-table-length somp-syslog-level WARNING WARNING system-log-level NOTICE process-log-level 0.0.0.0 process-log-in-address. process-log-port call.trace disabled internal-trace disabled logafilter all default-gateway. 192.168.1.1 enabled restant exceptions telnet-timeout console-timeout 9 remote-control enabled link-redundancy-state disabled



Cisco UCM 6.x SIP to AT&T SIP with Acme Packet 3000-4000 SBC March 2014

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