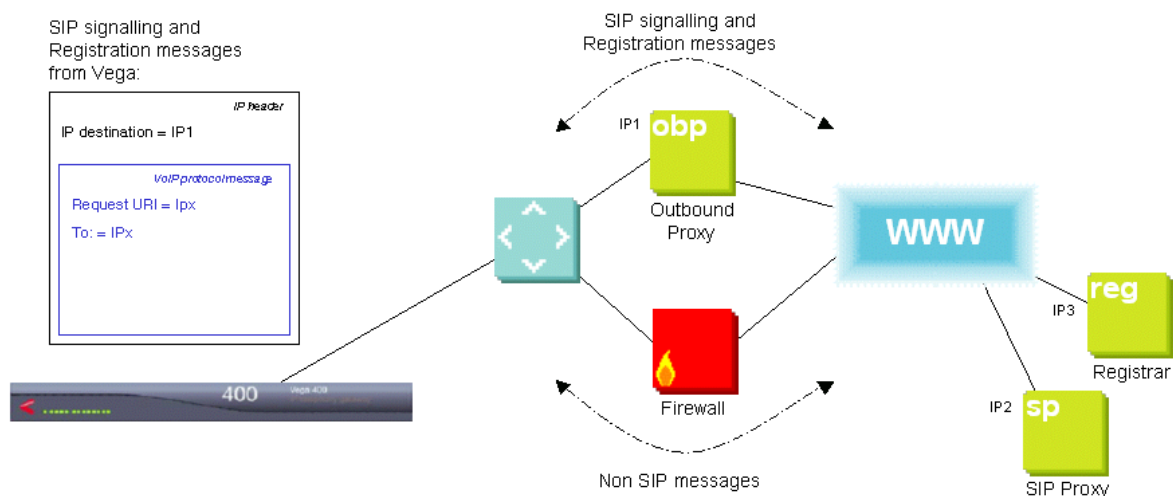# Information Note
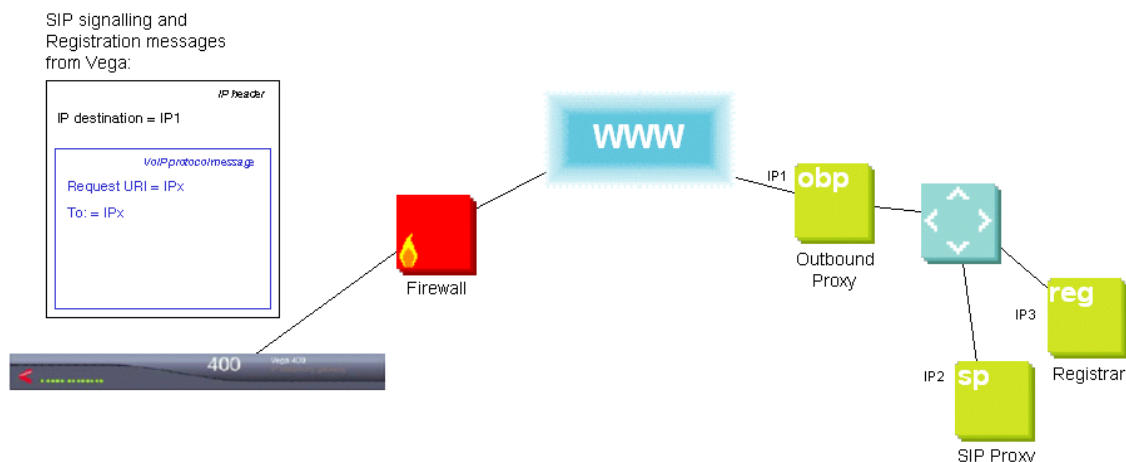## Configuring a Vega for use with an Outbound Proxy

Use of outbound proxies

OutBound proxies are devices that will forward SIP signaling (and frequently RTP media traffic too). OutBound proxies are used for a number of reasons, including, firewall traversal – both in parallel with a firewall and situated in the Internet as a Session Border Controller, and also for hiding customer IP addresses – calls are all routed through one point so that a public ITSP address can be used for accessing the customers, rather than the customer's own IP address.

Two example scenarios that use outbound proxies are as follows:

In this first scenario an outbound proxy allows SIP signalling and Registration messages (and usually RTP as well) to be handled by a SIP aware device that acts in parallel to an existing firewall. This ensures that the firewall does not get overloaded by SIP traffic and also means that the firewall does not have to support a SIP ALG.

In this second scenario an outbound proxy (or session border controller) is used as an access point to Proxies / Registrars located behind it.

Configuring SIP URI and SIP message destination - Generic

Vega gateways use the following configuration parameters to specify the first IP destination of the SIP signalling and Registration messages, and to construct the Request URI header and To: header for those messages. (When generated by the Vega gateway the Request URI and the To: header are the same.)

Registration
        IP destination   = sip.registrar.n.ipname:sip.registrar.n.port
        Request URI / To: = . . . @sip.reg_domain:sip.reg_req_uri_port[1]

SIP signalling
        IP destination   = sip.proxy.n.ipname:sip.proxy.n.port
If sip.profile.y.to_header_host = ipname {0}   then:
        Request URI / To: = . . . @sip.proxy.n.ipname:sip.req_uri_port[2]
If sip.profile.y.to_header_host = reg_domain {1}   then:
        Request URI / To: = . . . @sip.reg_domain:sip.req_uri_port[3]
If sip.profile.y.to_header_host =alt_domain   then:
        Request URI / To: = . . . @sip.alt_domain:sip.req_uri_port[4]

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[1] If reg_req_uri_port=0 then no port number will appear in the URI
[2] If req_uri_port=0 then no port number will appear in the URI
[3] If req_uri_port=0 then no port number will appear in the URI
[4] If req_uri_port=0 then no port number will appear in the URI

Configuring SIP URI and SIP message destination – For use with an OutBound Proxy

When using an outbound proxy (OBP), SIP signalling and Registration messages need to be sent to the OBP rather than the destination Proxy / destination Registrar directly. It is the job of the outbound proxy to forward the messages to the destination Proxy / destination Registrar.

The OBP uses the IP details in the Request URI / To: to send the SIP signalling / Registration message to the correct destinations.

When using an outbound proxy with the Vega, the configuration of the Vega is as follows:

Registration
      sip.registrar.n.ipname= IP address or DNS name of outbound proxy
      sip.registrar.n.port   = IP port of outbound proxy
      sip.reg_domain   = IP address or DNS name of destination Registrar
      sip.reg_req_uri_port = IP port of destination Registrar

SIP signalling
      sip.proxy.n.ipname   = IP address or DNS name of outbound proxy
      sip.proxy.n.port   = IP port of outbound proxy
If sip.profile.y.to_header_host = ipname {0}   then:
      sip.proxy.n.ipname   … can't be destination SIP proxy as this is the outbound proxy address
      sip.req_uri_port   = IP port of outbound proxy
If sip.profile.y.to_header_host = reg_domain {1}   then:
      sip.reg_domain   = IP address or DNS name of destination SIP proxy
      sip.req_uri_port   = IP port of outbound proxy
If sip.profile.y.to_header_host = alt_domain   then:
      sip.alt_domain   = IP address or DNS name of destination SIP proxy
      sip.req_uri_port   = IP port of outbound proxy

- ⚠ 'sip.profile.y.to_header_host=reg_domain or alt_domain' must be selected
- ⚠ '_advanced.sip.to_header_host=reg_domain or alt_domain' must be selected
- ⊘ '_advanced.sip.reg_domain_to_header=reg_domain or alt_domain' must be selected

Also the following parameters need to be configured
      set ._advanced.sip.3xx_invite_to_proxy=1
      set ._advanced.sip.bye_also_invite_to_proxy=1
      set ._advanced.sip.refer_invite_to_proxy=1
… setting these parameters ensures that the outbound proxy remains in circuit even when redirection requests are made.

So when an outbound proxy is used the outbound proxy IP is set up in both the SIP proxy and Registrar IP configuration entries; the actual (destination) SIP proxy / Registrar must have the same IP address, though the IP ports for the SIP proxy and Registrar may be different.

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