Anycast IP Addresses

Summary

One of the big changes in VVP is the use of anycast addresses. They will automatically route a customer to the closest proxy, and should that proxy be offline or in maintenance, they'll automatically be routed to the closest available proxy.

Along with this there are anycast addresses which will enable SIP Trunk customers to select the closest proxy to them, with fail-over to a secondary and tertiary service, via DNS SRV.

Anycast Addresses

This the the list of addresses that will be anycasted.

Record	IP	DNS SRV
sip.voice.isx.nz (Or any customer realm)	114.23.1.50	sip01-akld.voice.isx.nz sip01-wgtn.voice.isx.nz sip01-chch.voice.isx.nz
sip-trunk-anycast.voice.isx.nz	114.23.1.51	sip02-akld.voice.isx.nz sip02-wgtn.voice.isx.nz sip02-chch.voice.isx.nz
sip-trunk-anycast-akld.voice.isx.nz	114.23.1.52	sip02-akld.voice.isx.nz sip02-wgtn.voice.isx.nz sip02-chch.voice.isx.nz
sip-trunk-anycast-wgtn.voice.isx.nz	114.23.1.53	sip02-wgtn.voice.isx.nz sip02-chch.voice.isx.nz sip02-akld.voice.isx.nz
sip-trunk-anycast-chch.voice.isx.nz	114.23.1.54	sip02-chch.voice.isx.nz sip02-wgtn.voice.isx.nz sip02-akld.voice.isx.nz

These are our primary registration proxy, our primary sip registration proxy, followed by geo specific anycast IP's.

Primary Registration Proxy

This IP will be used where we currently use *.sip.voyager.co.nz or your own wildcard record. As part of the migration this will be the address that will be used if DNS SRV is not enabled on the device.

Primary SIP Registration Proxy

For PABX that utilise a SIP trunk the proxy can be either the customer realm (e.g. dadfta.sip. voyager.co.nz) or sip-trunk-anycast.voice.isx.nz . This doesn't replace the user authentication, but will automatically route the PABX through to the closest proxy.

Geographical Specific Registration Proxy

For those that wish to specify a proxy location endpoint you can select one of the anycast records as your proxy.

> If you are not using DNS SRV with your PABX, the failover is purely based on anycast and could take upwards of a minute to fail-over. We recommend wherever possible use DNS SRV as the fail-over is much quicker.

The fail-over works as follows for each proxy if using DNS SRV

Anycast Record	Primary (Weight 10)	Secondary (Weight 20)	Tertiary (Weight 30)
sip-trunk-anycast-akld.voice.isx.nz	sip02-akld. voice.isx.nz	sip02-wgtn. voice.isx.nz	sip02-chch. voice.isx.nz
sip-trunk-anycast-wgtn.voice.isx.nz	sip02-wgtn. voice.isx.nz	sip02-chch. voice.isx.nz	sip02-akld. voice.isx.nz
sip-trunk-anycast-chch.voice.isx.nz	sip02-chch. voice.isx.nz	sip02-wgtn. voice.isx.nz	sip02-akld. voice.isx.nz

The rationale for these decisions are based on distance apart. Currently Auckland Wellington is approximately 9ms, where Wellington Christchurch is 6ms.