Tunneling Mechanism Feature Comparison (v0.1)

Feature	*iron*	*6to4*	*6rd*	*isatap*	*teredo*	*6a44*	*TSP*	*MOBIKE*
IPv6-in-IPv4 encapsulation	Y	Y	Y	Y	Y	Y	Y	Y
Any-in-any encapsulation	Y	N	N	N	N	N	Y	Y
Dynamic Path MTU Discovery	Y	N	N	N	N	N	N	[?]
Router-to-router tunneling	Y	Y	Y	N	N	N	Y	Y
NAT traversal	Y	N	N	N	Y	Y	Y	Y
Scalable Provider Independent Addressing	Y	[3]	N	N	[3]	N	N	Y
Integrated mobility management	Y	N	N	N	N	N	[?]	Y
Multihoming / multiple interfaces	Y	N	N	N	N	N	[?]	Y
Native IPv6 prefixes (no embedded IPv4)	Y	N	N	N	N	N	Y	Y
Stateless	[1]	Y	Y	[4]	N	[6]	[7]	N
In/out-bound traffic engineering	Y	N	N	N	N	N	N	Y
Anycast border router discovery	[2]	N	N	[5]	N	[?]	Y	N

[1] Customer router keeps FIB soft state for recently-visited destinations; VP edge router maintains state for each customer it serves; VP core router maintains full FIB the same as other BGP routers.
[2] Customer router uses anycast to discover close-by VP core router; VP core router returns unicast addresses of close-by VP edge routers.
[3] 6to4 prefixes based on 2002::/16 and teredo prefixes based on 2001:0::/32 are “provider independent” within the IPv6 space, but embed an IPv4 address and hence are tied to an ISP
[4] ISATAP may require per-neighbor state in some deployments to avoid tunnel looping attacks. This state is not required in sites that implement ingress filtering.
[5] ISATAP PRL may include anycast border router address.
[6] As with any application that traverses a NAT, 6a44 is dependent upon address and port mapping state in the NAT box itself. The 6a44 customer device must therefore send periodic keepalives to keep NAT state alive and to keep its IPv6 address delegations from expiring.
[7] TSP client can be stateless after initial config, server always keeps state