

Protocol		HSRP (Hot Standby Router protocol)	VRRP (Virtual Redundancy Router Protocol)	GLBP (Gateway Load Balancing Protocol)
Features	Routers role	- 1 active router. - 1 standby router. - 1 or more listening routers.	- 1 master router. - 1 or more backup routers.	- 1 AVG (Active Virtual Gateway). - up to 4 AVF routers on the group (Active Virtual Forwarder) passing traffic. - up to 1024 virtual routers (GLBP groups) per physical interface.
		- Use virtual ip address.	- Can use real router ip address, if not, the one with highest priority become master.	- Use virtual ip address.
Scope		Cisco proprietary	IEEE standard	Cisco proprietary
Optimization features	Tracking	yes	yes	yes
	Preempt	yes	yes	yes
	Timer adjustments	yes	yes	yes
Traffic type		224.0.0.2 – udp 1985	224.0.0.18 – udp 112	224.0.0.102 udp 3222
Timers		Hello - 3 seconds	Advertisement – 1 second	Hello - 3 seconds
		(Hold) 10 seconds	(Master Down Interval) 3 * Advertisement + skew time	(Hold) 10 seconds
			(Skew time) (256-priority) / 256	
Load-balancing functionality		- Multiple HSRP group per interface/SVI/routed int.	- Multiple HSRP group per interface/SVI/routed int.	Load-balancing oriented - Weighted algorithm. - Host-dependent algorithm. - Round-Robin algorithm (default).
		Client ip gateway support needed for optimal load-balancing.	Client ip gateway support needed for optimal load-balancing.	Clients are automatically updated with virtual MAC according to load-balancing algorithm through ARP requesting a unique virtual gateway.