

Design Concern	OSPF	IS-IS
Scalability	2 tier hierarchy , less scalable	2 tiers hierarchy , less scalable
Working on Full Mesh	Works well with mesh group	Works well with mesh group
Working on a Ring Topology	Ring is hard for the routing protocols, in case of a failure micro loop occurs	Same as OSPF
Working on Hub and Spoke	Works poorly, require a lot of tuning	Same as OSPF
Fast Reroute Support	Yes - IP FRR	Yes - IP FRR
Suitable on WAN	Yes	Yes
Suitable on Datacenter	DCs are full mesh. And full mesh operation requires a lot of tuning, instead in the large scale data centers, layer 2 protocols or BGP is used	Same as OSPF but since IS-IS runs on top of layer 2, it is used as the control plane for the many overlay technologies such as OTV, Fabricpath, TRILL, SPB in the datacenter
Suitable on the Internet Edge between two AS	No it is designed as an IGP	No it is designed as an IGP
Standard Protocol	Yes IETF Standard	Yes IETF Standard
Stuff Experience	Very well known	Not well known, although it is common in the Service Provider networks, it is not used in the Enterprise networks
Overlay Tunnel Support	Yes	Doesn't support IP tunnels
MPLS Traffic Engineering Support	Yes with CSPF	Yes, with CSPF
Security	Less secure	More secure since it is on layer 2
Suitable as Enterprise IGP	Yes	No, it lacks IPsec, it can be still implemented as GRE over IPSEC since GRE supports IP and Non-IP protocols
Suitable as Service Provider IGP	Yes	Definitely, actually IS-IS is invented to be used in the large scale service provider networks
Complexity	Complex, it has 11 types of LSA	Easy, there are only two levels for the entire operation
Policy Support	Good	Good
Resource Requirement	SPF requires more processing power compare to DUAL algorithm but in 2016 its not an issue for the most routers	SPF requires more processing power compare to DUAL algorithm but in 2016 its not an issue for the most routers
Extendibility	Not good	Good, thanks to TLV support
IPv6 Support	Yes but requires new protocol , OSPFv3	Yes, it doesn't require new protocol, IPv6 is implemented with the new TLVs only
Default Convergece	Slow	Slow
Training Cost	Cheap	Cheap
Troubleshooting	Easy	Very easy
Routing Loop	Good protection, LSA Sequence numbers inside an area and for the multi area design, all non-backbone areas have to be connected to the backbone area	Good protection, LSP sequence numbers inside of a Level, and UP/Down bit between two levels in the multi level IS-IS design