Design Concern	OSPFv2	OSPFv3
Scalability	Good	Better since Router and Network LSA doesn't contain prefix information but only topology information
Working on Full Mesh	Works well with mesh group	Works well with mesh group
Working on Hub and Spoke	Works poorly, require a lot of tuning	Works bad requires tuning
Fast Reroute Support	Yes - IP FRR	Yes - IP FRR but limited platform support
Suitable on WAN	Yes	Yes
Suitable on Datacenter	DCs are full mesh. So, Not well	DCs are full mesh so Not well
Suitable on Internet Edge	No it is designed as an IGP	No it is designed as an IGP
Standard Protocol	Yes IETF Standard	Yes IETF Standard
New LSAs	None	Links LSA (Type 8) is used for adjaceny formation and link local scope only, Inter-Area-Prefix LSA (Type9) which is one of the biggest enhancement since it is used to carry prefix information only,inside an area
LSA Types	Router(Type1),Network(Type2),Summary(Type3),ASBR External(Type4),AS External(Type5),NSSA(Type7)	Router(Type1),Network(Type2),Inter-Area Prefix(Type3),Inter-Area Router(Type4),AS External(Type5),NSSA(Type7),Link LSA(Type8),Intra-Area-Prefix-LSA(Type9)
Transport	Multicast, 224.0.0.5 and 224.0.0.6	Same but with IPv6 addresses. Multicast. FF02::5 and FF02::6
Reachability info handeling	Inside an Area, Router and Network LSA carries the reachability information,between areas reachability info is carried in Summary(Type3) LSA	Inside an area reachability information is carried in Intra Area Prefix LSA (Type9) which is new LSA type, inter area prefixes are still carried in Type 3 LSA but name is changed as Inter-Area prefix LSA
Topology info handeling	Inside an Area Router and Network LSA carries the topology information,topology info is not carried beyond an area	Same.Inside an Area Router and Network LSA carries the topology information,topology info is not carried beyond an area
Stuff Experince	Very well known	Not well known, especially topology and reachability information handling,Multi Area Adjaceny and new LSA types should be understood better
Overlay Tunnel Support	Yes it supports	Yes it supports
MPLS Traffic Engineering Support	Yes with CSPF or external controller	Yes, with CSPF or external controller
Security	MD5 Authentication	Authentication is removed since it runs on top of IPv6, IPv6 supports IPSEC and Authentication, this simplifies the OSPF header
Suitable as Enterprise IGP	Yes	Yes
Suitable as Service Provider IGP	Yes	Definitely
Complexity	Easy	Moderate
Resource Requirement	Full SPF runs on prefix or topology change so it is worse than OSPFv3	If topology doesn't change, full SPF is not needed. Prefix information is carried in new LSA, not in Router LSA anymore
IPv6 Support	No	Yes
IPv4 Support	Yes	Yes
Default Convergece	Slow	Even slower if multiple address families are used
Troubleshooting	Easy	Harder,requires understanding IPv6 addressing, after that it is same packet types, LSA, LSU, DBD
Routing Loop	Inter area prefixes should be received from ABR,all non-backbone areas should be connected to the backbone area	Same as OSPFv2. Inter area prefixes should be received from ABR,all non-backbone areas should be connected to the backbone area