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IS-IS Neighborship Rules

For two Routers (IS) to become IS-IS neighbors:

1. Interface MTUs must match
2. Levels must match
3. Areas must match in case of Level-1
4. System IDs must not be repeated
5. Authentication must succeed

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IS-IS L2 Multicast Addresses

01-80-C2-00-00-14	L1 IS's for IS-IS Adjacencies
01-80-C2-00-00-15	L2 IS's for IS-IS Adjacencies
09-00-2B-00-00-04	By IS for ES-IS Adjacencies
09-00-2B-00-00-05	By ES for ES-IS Adjacencies

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IS-IS Adjacency Rules

- ✓ Two **L1-only** Routers form an **L1 adjacency** only if their AIDs match
- ✓ Two **L2-only** Routers from an **L2 adjacency**, even if their AIDs are different
- ✓ An **L1-only** Router forms an **L1 adjacency** with an **L1/L2** Router only if their AIDs match
- ✓ An **L2-only** Router forms an **L2 adjacency** with an **L1/L2** Router even if their AIDs mismatch
- ✓ Two **L1/L2** Routers form both **L1 and L2 adjacencies** if their AIDs match
- ✓ Two **L1/L2** Routers form only **L2 adjacency** if their AIDs do not match
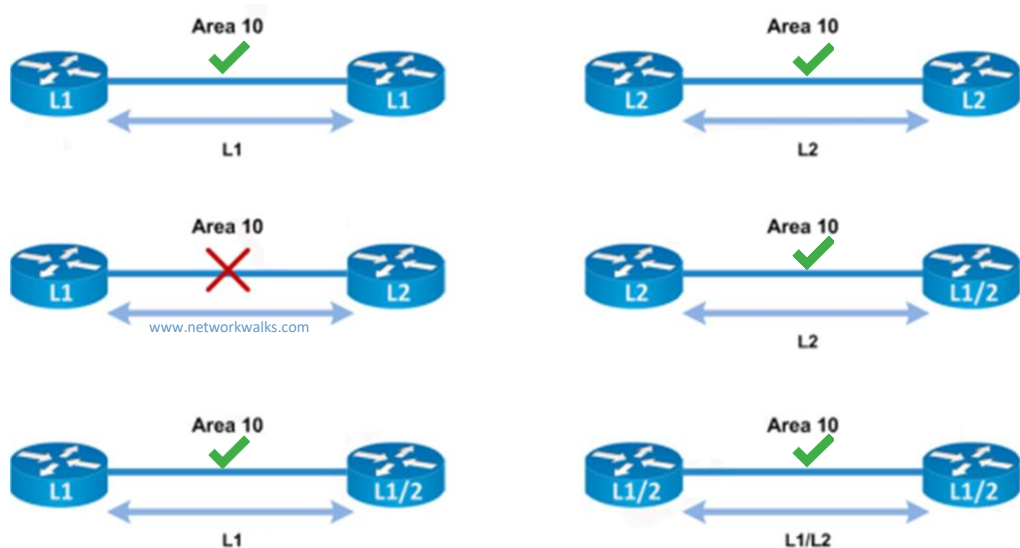
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Imp IS-IS TLV's

	Name	Use
1	Area Address	Hello, LSP
2	IS Neighbors	LSP
3	ES Neighbors	L1 LSP
5	Prefix Neighbors	L2 LSP
6	IS Neighbors	Hello, L2 L
8	Padding	Hello
128	IP Inernal Reach	LSP
129	Protocol Suported	Hello, LSP
131	IDRPI	SNP, L2 LSP
132	IP Interface Address	Hello, LSP

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IS-IS Adjacency Rules

Area 10 ✓ L1—L1 — L1
Area 10 ✓ L2—L2 — L2
Area 10 ✗ L1—L2 — L2
Area 10 ✓ L2—L1/2 — L2
Area 10 ✓ L1—L1/2 — L1
Area 10 ✓ L1/2—L1/2 — L1/L2

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IS-IS Network (Interface) Types

Network / Int Type	Detail
POINT-to-POINT	▪ No DIS Election on P-P Interfaces ▪ Point-to-point IIHs are exchanged ▪ Both sides of a link should be P-P type
BROADCAST	▪ DIS is elected ▪ Level 1 or Level 2 LAN IIHs are exchanged ▪ All sides of segment should be BCast type, otherwise adjacency will not come UP ▪ Default Network Type of IS-IS

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