IS-IS Routing Protocol – Cheatsheet (ATech) – Part-3 v1

ONLINE TRAINING ACADEMY
Training The Generations

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

waqas@aurumme.com

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

waqas@aurumme.com

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

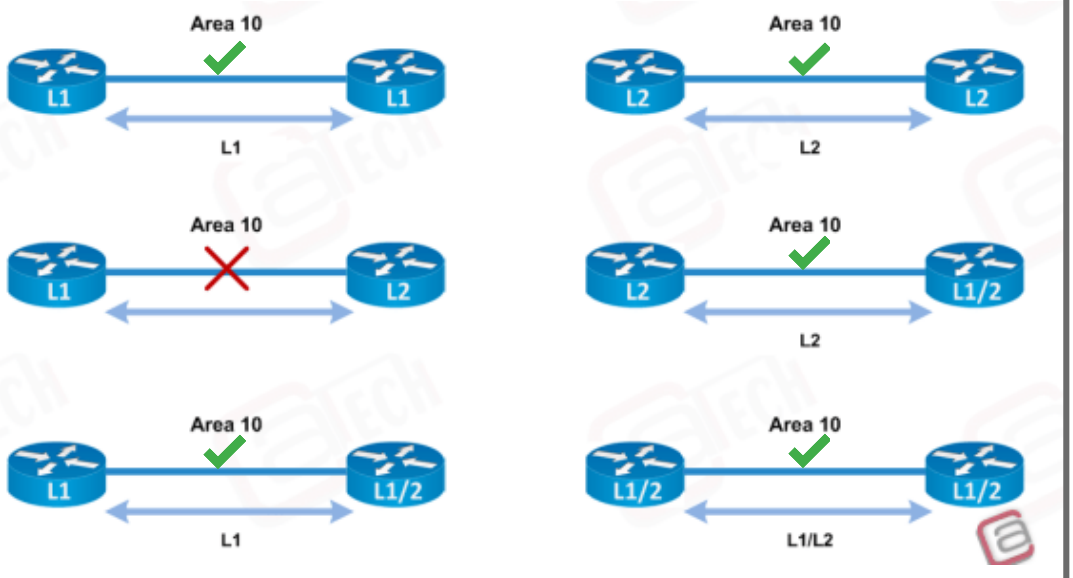
waqas@aurumme.com

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

waqas@aurumme.com

IS-IS Adjacency Rules



waqas@aurumme.com

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, otherwise adjacency will not come UP
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

waqas@aurumme.com

Youtube.com/c/ATechIT
Facebook.com/ATechIT1
Linkedin.com/company/ATechIT

Aurumme.com/ATech ..... Your Feedback, Comments are always Welcomed: waqas@aurumme.com

Visit ATech website & YouTube Channel for more FREE resources:
- ✓ Cheatsheets, Interview Questions & Answers, Quiz
- ✓ Labs (Packet Tracer, GNS3)
- ✓ Free Video Lectures (including CCNA)

www.aurumme.com/ATech (Waqas Karim)