

Internet Hierarchy

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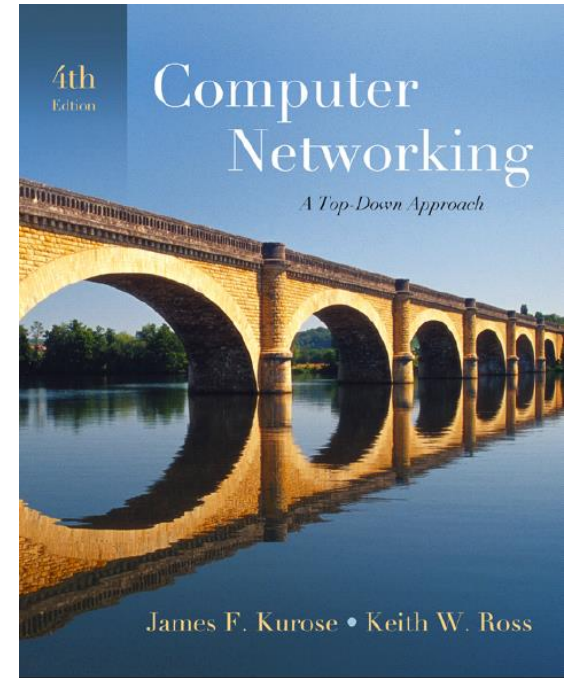
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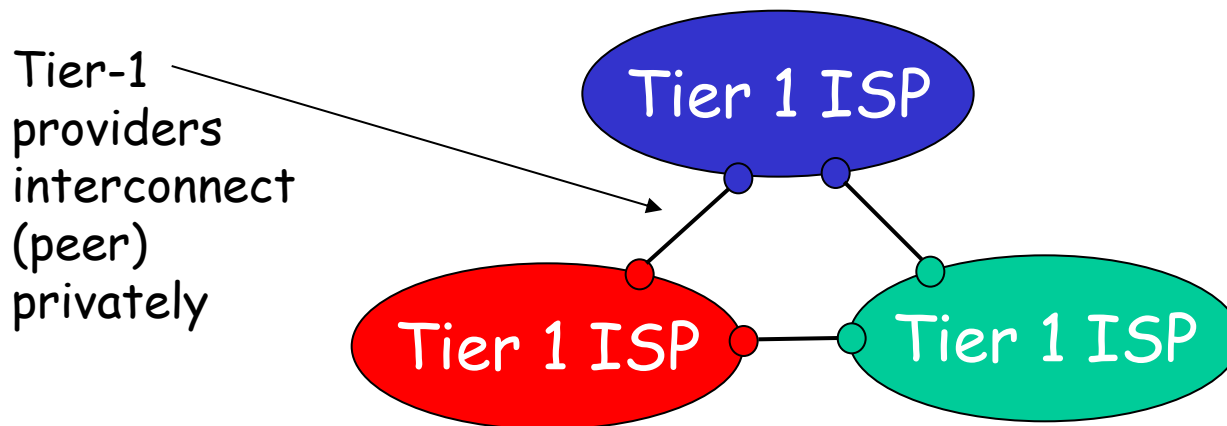


*Computer Networking:
A Top Down Approach ,
4th edition.*

*Jim Kurose, Keith Ross
Addison-Wesley, July
2007.*

Internet structure: network of networks

- ❑ roughly hierarchical
- ❑ **at center: "tier-1" ISPs** (e.g., Verizon, Sprint, AT&T, Cable and Wireless), national/international coverage
 - ❖ treat each other as equals

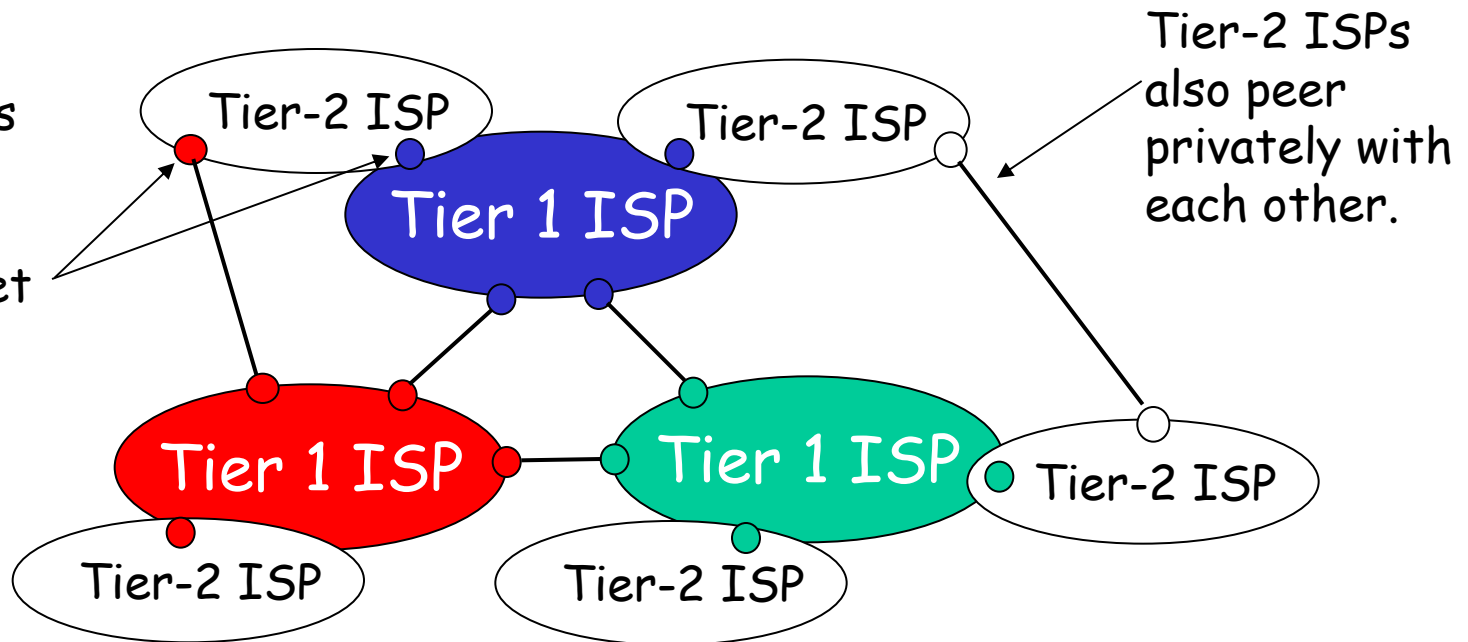


Internet structure: network of networks

□ "Tier-2" ISPs: smaller (often regional) ISPs

- ❖ Connect to one or more tier-1 ISPs, possibly other tier-2 ISPs

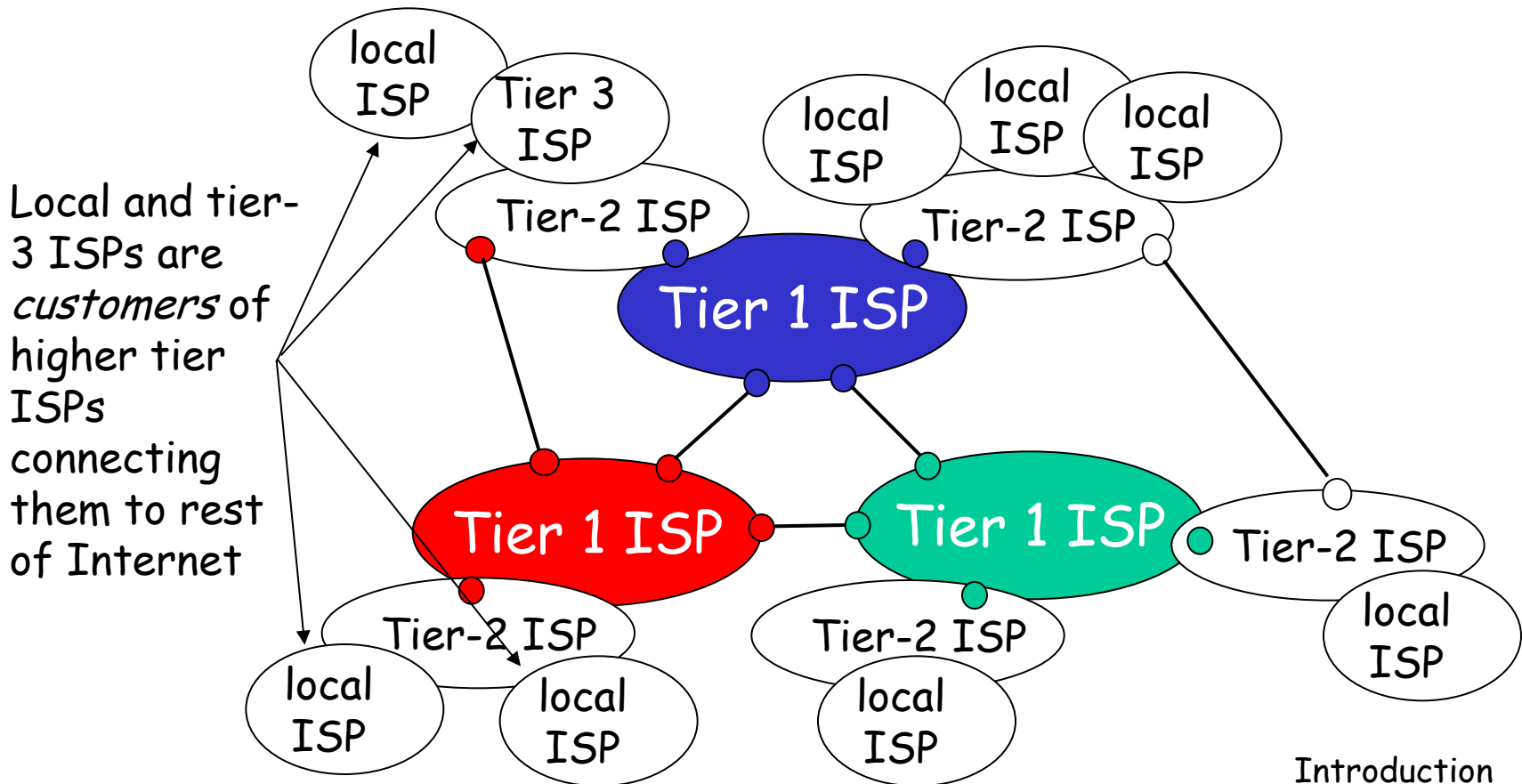
Tier-2 ISP pays tier-1 ISP for connectivity to rest of Internet
□ tier-2 ISP is customer of tier-1 provider



Internet structure: network of networks

□ "Tier-3" ISPs and local ISPs

- ❖ last hop ("access") network (closest to end systems)



Internet structure: network of networks

- a packet passes through many networks!

