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## SNA•ps Gateway and LAN Routing Services (4/93)

Article Created: 7 April 1993

TOPIC -----

I'm confused about the appropriate time to use a router with a SNA•ps Gateway. Here are some examples to help explain my question:

- If I'm using s SNA•ps gateway with a Coax/Twinax card or Serial NuBus card and then distributing those sessions to an attached network with either LocalTalk, Ethernet, or Token Ring, I don't need a router.
- Now if I have a SNA•ps gateway running on a Token Ring card, is a router needed to distribute SNA sessions via TokenTalk as well as LocalTalk on the same gateway system?
- What if I utilize a system with Ethernet, LocalTalk, and Token Ring on the SNA•ps Gateway system. Can I distribute SNA sessions over all three?

Since SNA•ps is an AppleTalk to SNA gateway, and is at a higher level on the OSI model than a router, does that negate my need for a router on a system using a Token Ring Card and distributing sessions over Ethernet?

DISCUSSION -----

Any SNA•ps gateway (Coax, Token Ring, or SDLC) can distribute SNA traffic to clients on AppleTalk networks. The Macintosh performing the gateway function can distribute AppleTalk traffic to only one physical network type, at a time, as defined by the Network Control panel in the gateway machine. Perhaps a table of connections will help:

Gateway type	Physical LAN	Network Control Panel
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COAX	LocalTalk	Built-in
COAX	Ethernet	EtherTalk
COAX	Token Ring	TokenTalk
SDLC (Serial)	LocalTalk	Built-in
SDLC	Ethernet	EtherTalk
SDLC	Token Ring	TokenTalk

Token Ring	LocalTalk	Built-in
Token Ring	Ethernet	EtherTalk
Token Ring	Token Ring	TokenTalk

In all the environments listed above, you do NOT need a router! The only confusing one is Token Ring for SNA and TokenTalk for AppleTalk. Both protocols are running on the Token Ring card at the same time. Still no router needed.

If you have a LAN environment with multiple physical environments (LocalTalk, Ethernet, and Token Ring), then the gateway machine will determine the initial physical LAN type for AppleTalk client distribution. You will need a router to get the traffic to other physical LAN types in this case.

You may have routers in just one LAN type for all the reasons you need routers, to break-up large networks to improve performance.

In reality, an SNA gateway is really the combination of an SNA controller and a special purpose router. It does not use the OSI model (it is SNA) and it is not at a "higher level" than a router.

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Keywords: <None>

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19960215 11:05:19.00

Tech Info Library Article Number: 11934