Technical Tip
COM400
IGMP Query Packet Sets COM400 Port as Dynamic Router

If a COM400 receives an IGMP Query packet from a managed ethernet switch it will automatically assign that port as a "dynamic router port" and force all multicast traffic to flow across the connected port.

Suggested Action:

It is recommended that managed ethernet switches only be connected to the 10G ports on the COM400 chassis, and that only management devices such as Laptops be directly connected to the 1G ports. It is recommended that the Router be connected to the managed ethernet switch instead of to the 1G port on the COM400.
If the Router is connected to the 1G port on the COM400, do not connect managed ethernet switches to the Router as the switch may send the IGMP Join and Query request through the router to the COM400. This will then trigger the 1G port as a dynamic router which will flood the Router with multicast traffic and prevent remote management. Any devices downstream from the COM400 1G port must not send any IGMP Queries to the COM400.

Background

IGMP Protocol – "10 Thousand Foot View"
When an end device is tuned to receive an IP video stream via multicast it will send an IGMP Join request to the IP multicast distribution network. The network will then forward the requested multicast stream to that end device.
The managed ethernet switch is generally configured to be an IGMP Querier device on the network and it will then send occasional IGMP Query request packets asking all the end devices to send another IGMP Join request. If an IGMP Join request is not received periodically, the network will drop that end device from the IGMP group.

Technicolor recommends ports used for Managed Ethernet switches be set as router port manually.

In situations with more complicated multicast routing, there may be multiple IGMP Queriers in the network and an IGMP Query may come in on an unexpected COM400

Port Related Configuration

Port	Router Port	Fast Leave
*	☐	☐
1	☐	☐
2	☐	☐
3	☐	☐
4	☐	☐
5	☐	☐
6	☐	☐
7	☐	☐
8	☐	☐
9	☐	☐
10	☐	☐
11	☑	☐

Save Reset

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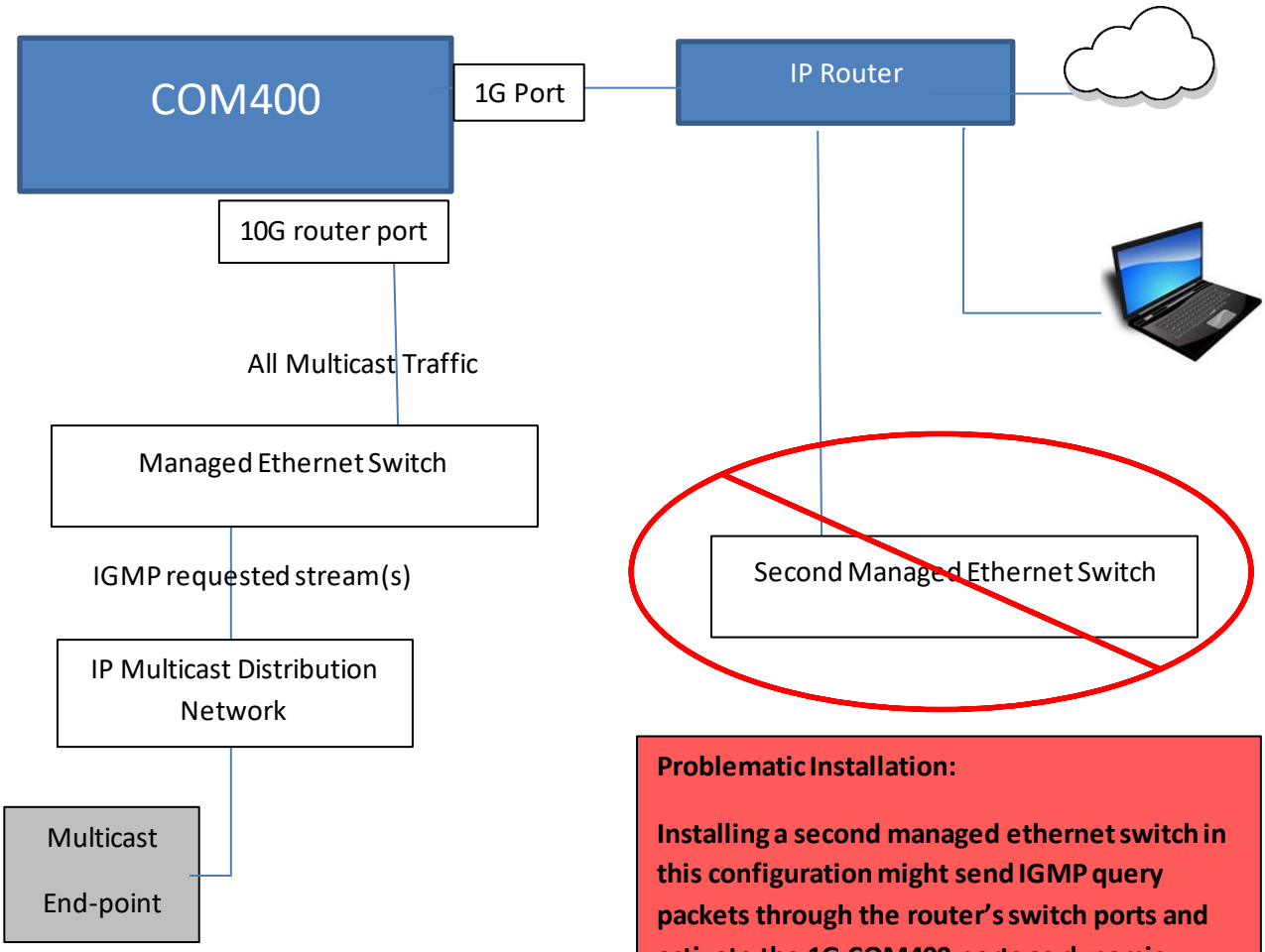
port. By following the Preferred installation diagram below, there is no risk of an IGMP Query to come in on an unexpected port on the COM400.



Problematic Installation:

Installing a second managed ethernet switch in this configuration might send IGMP query packets through the router's switch ports and activate the 1G COM400 ports as dynamic router ports. This will cause the COM400 to send all Multicast traffic across the 1G ports, flooding the router with multicast traffic.

Be sure there are no IGMP Queriers active elsewhere in the network below the router or the second ethernet switch in this configuration.

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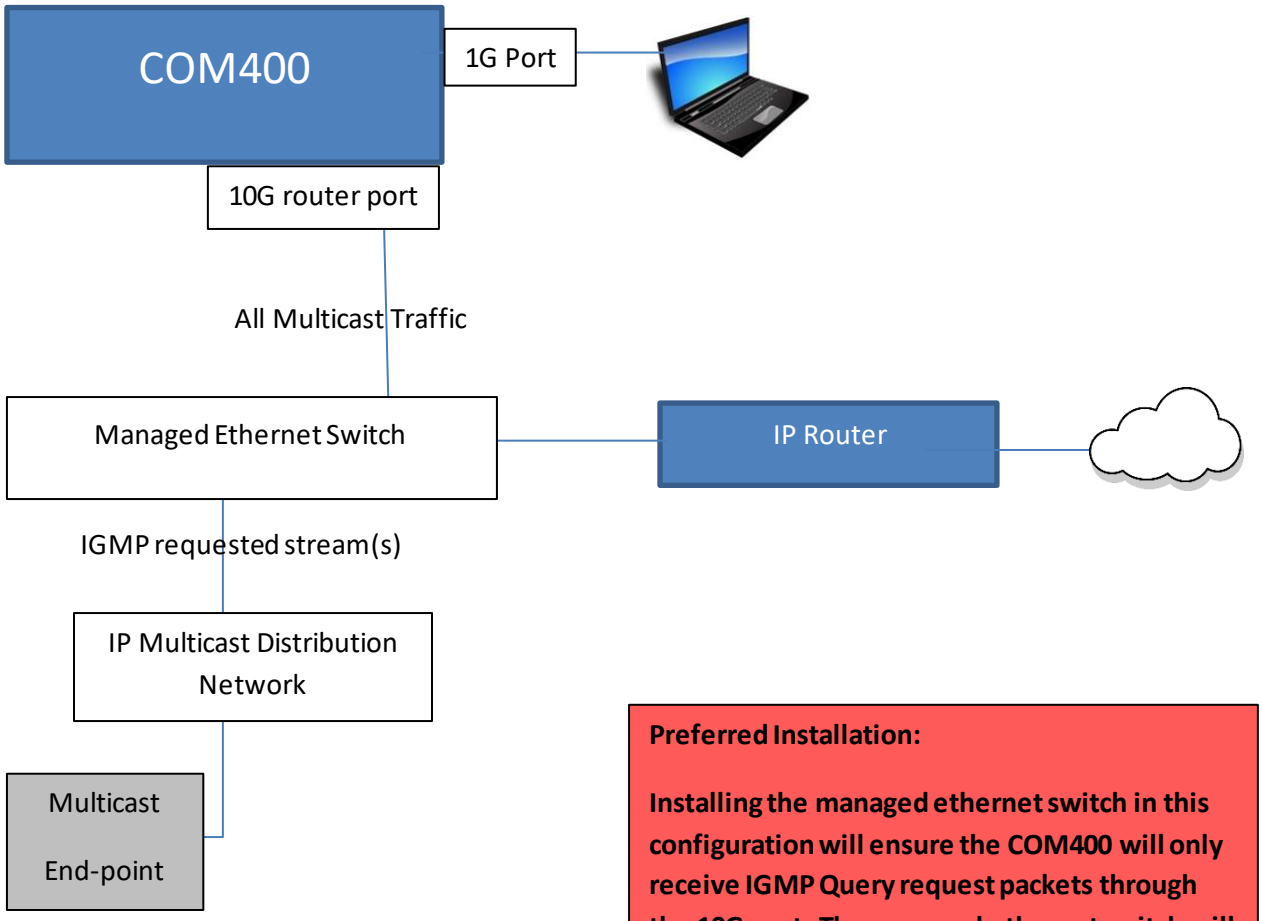

Preferred Installation:

Installing the managed ethernet switch in this configuration will ensure the COM400 will only receive IGMP Query request packets through the 10G port. The managed ethernet switch will properly forward multicast traffic only to the requested multicast endpoints and the router will not be flooded with unsolicited traffic.

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