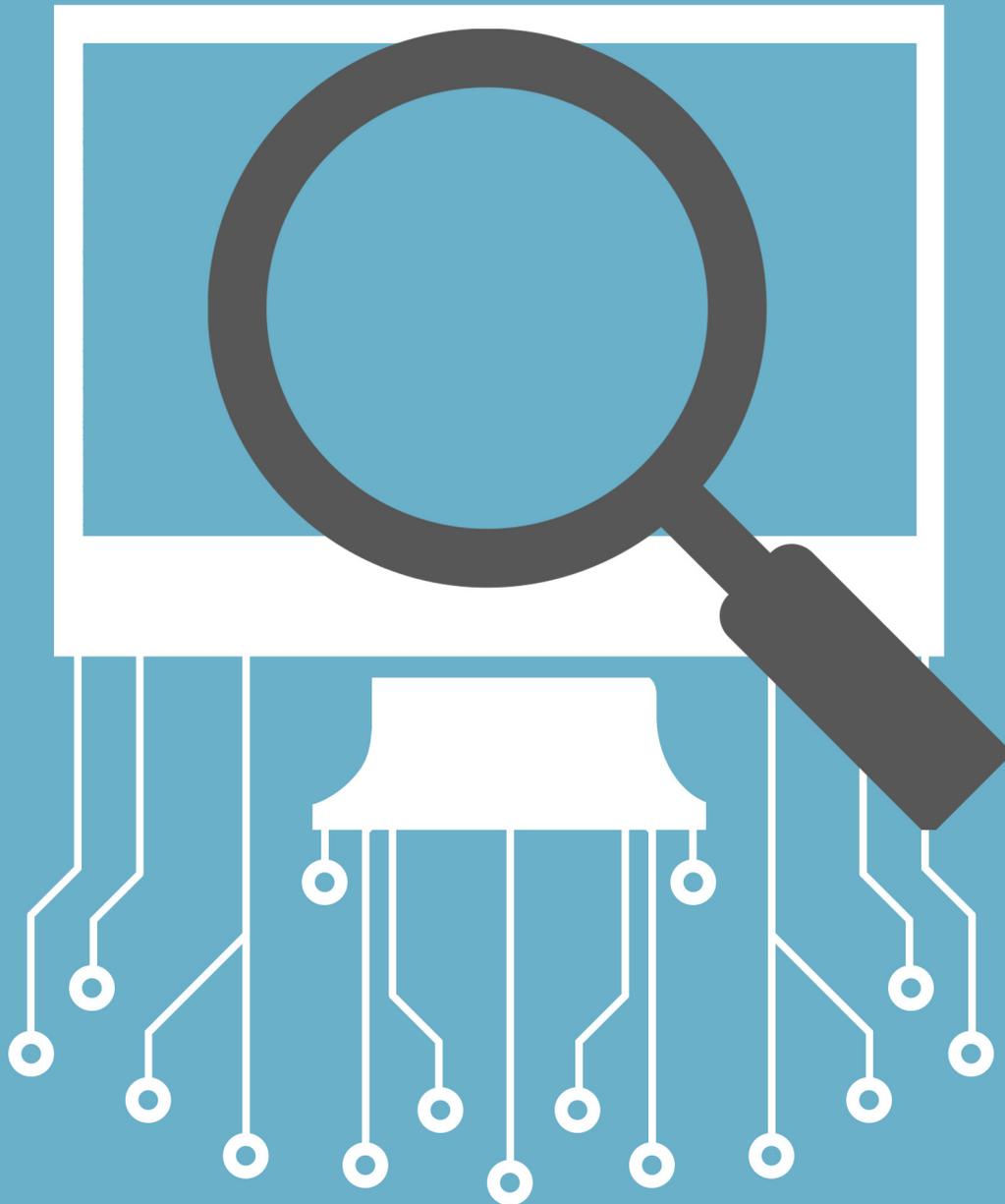


White paper

Load Balancing Solution

Distributing Complete Sessions across Multiple Monitoring Tools

By Jerry Dillard, CTO/Co-owner



GARLAND
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See every bit, byte, and packet®

Garland Technology's Traffic Distribution Technology

The Garland Technology FAB, (Filtering, Aggregating and Load Balancing System) provides the capability to distribute traffic amongst multiple ports that have been logically grouped. This paper will briefly discuss the user selectable "Session Aware" methodology of balancing the traffic among the ports in the group.

Why and When to use the Traffic Distribution Technology

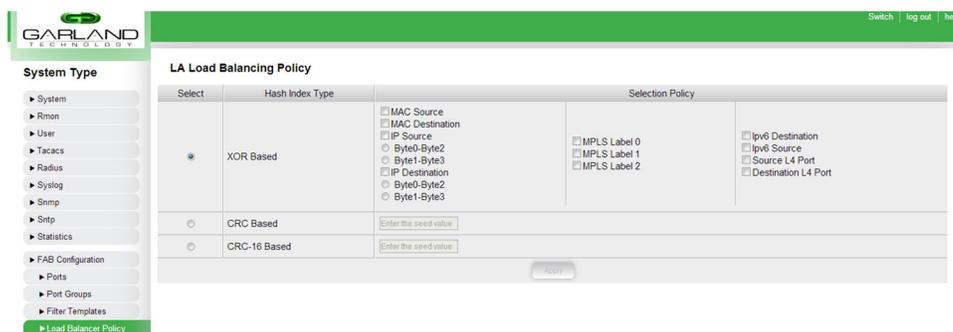
As today's networks become increasingly complex, we are seeing greater data speeds, an exponential growth in the amount of traffic that is placed on the network, and the need for many more tools to monitor the data that is flooding the network.

Often times, this increased presence on the network results in oversubscription of the ports on servers or other network equipment resulting in the need to deploy redundant equipment to handle the traffic load. Some network tools and servers will have multiple input ports to which traffic can be distributed to overcome oversubscription issues. To successfully deploy this redundant equipment it is necessary to have a means to split the traffic between the equipment in a manner that does not result in duplication of traffic and helps to prevent oversubscription of the ports. When distributing the traffic to the redundant servers or monitoring tools there is frequently a requirement to insure that the complete conversation, or session, is maintained between two end devices. This is commonly referred to as "Session Aware" load balancing.

How to use the Garland Technology Traffic Distribution Technology

One of the load balancing methods available on the FAB makes use of a proprietary hashing algorithm to decide which monitoring port to send the frames to. This algorithm is deterministic, resulting in a process that will guarantee that conversations (sessions) between end points will always be placed on the same port all of the time, which will provide session aware traffic distribution. This method also prevents out of order packet delivery.

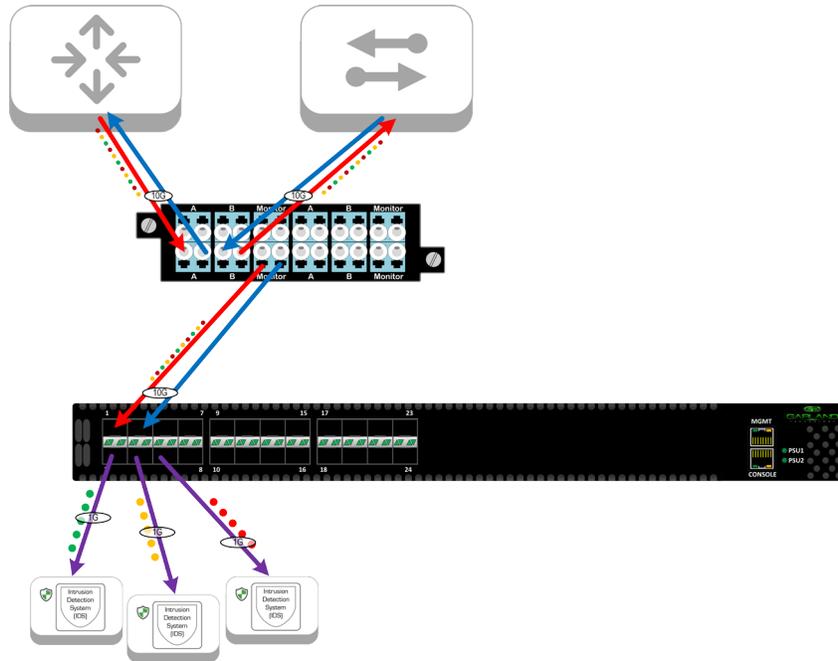
To achieve the desired result, the user must simply choose the XOR based traffic distribution method and then select Source IP Address and TCP/UDP (Source L4 Port) and Destination IP Address and TCP/UDP (Destination L4 Port) as the desired criteria. This can be seen in the illustration below.



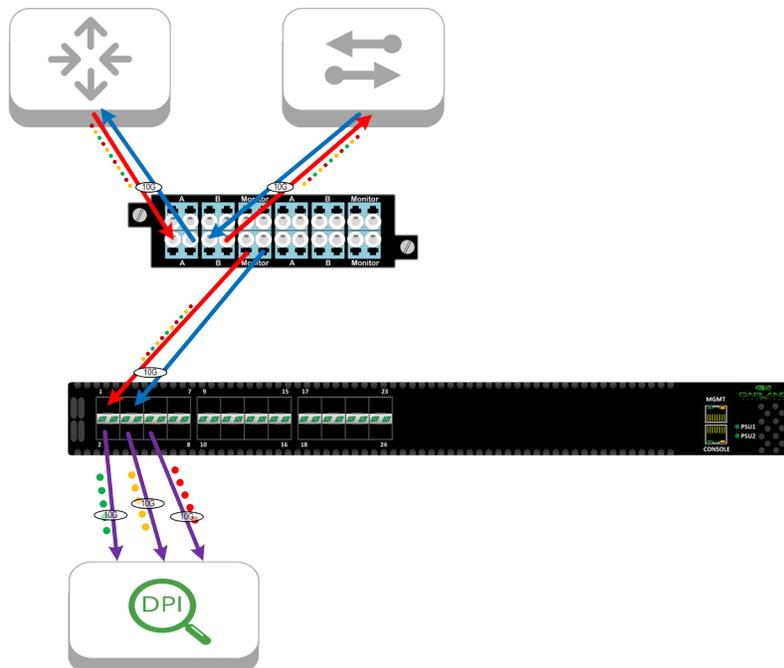
Criteria Choices for Traffic Distribution

Deployment Examples

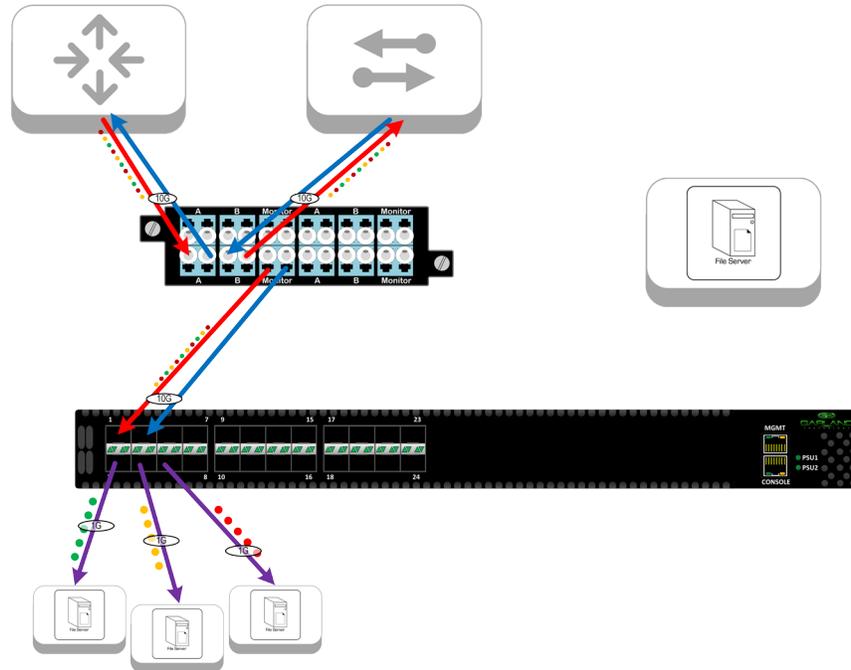
Single 10G Link to Redundant 1G Analyzers



Single 10G Link to Multiple Ports on One Appliance



Single 10G Link with Traffic Distribution to a 1G Server Farm



Summary

Garland Technology's Traffic Distribution Method is simple to deploy yet a very powerful means to help eliminate bottlenecks and oversubscription when used in conjunction with redundant devices to deal with the ever growing networks that are becoming increasingly common in today's network.

To learn more about your
Load Balancing Solution for your network,
contact the experts at Garland Technology.



Garland Technology is all about connections – connecting your network to your appliance, connecting your data to your IT team, and reconnecting you to your core business. It's all about better network design. Choose from a full line of access products: a network TAP that supports aggregation, regeneration, bypass and breakout modes; packet brokering products; and cables and pluggables. We want to help you avoid introducing additional software, points of failure and bulk into your network. Garland's hardware solutions let you **see every bit, byte, and packet[®]** in your network.

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