ARISTA delivering clear advantage

HEAnet adopt Arista's 10GbE Switches

HEAnet provides cutting edge Internet Services to Educational and Research Institutions & Organisations throughout Ireland. Established to leverage the potential of the Irish higher education sector's investment in technology, HEAnet is one of the largest Internet Service Providers in Ireland, delivering high bandwidth telecommunication links and value-added Internet services to the academic and research communities.

Project Background

To continue to meet client demand for additional bandwidth and services, HEAnet is constantly planning, developing and upgrading its infrastructure. In particular, the recent, rapid growth in demand for co-location, mirroring, streaming and virtualisation services has highlighted the need for cost-effective, high aggregate upstream bandwidth capable of delivering these fast provisioning services.

With aggregation and multiple Gigabit connections becoming unwieldy and increasingly expensive, cost-effective 10 GbE (gigabit Ethernet) switching was instrumental in HEAnet's plan to extend its managed service provision. "The search was on for the right switch", as Paul Mullen, HEAnet's Project Manager explains. "With our clients looking for us to provide 'hot standby' capability, we needed to find an affordable 1U (one unit of height, approx 5 cm), 16-24 port 10GbE switch. While cost, space and power consumption were important considerations, our primary concern was to find the best solution. The 24 Port Arista 7124s ticked all the boxes".

The Solution

"Having evaluated a number of oversubscribed 10GbE switches, what most impressed us about the 7100 series was that it was totally non-blocking, delivering 10GbE Wire Speed on all ports. In addition, the ability to carry both 1GbE and 10GbE gave us the flexibility to fully leverage our existing infrastructure. Happily, the 7124s was also the most cost-effective option we considered".

The Specification

With 2 Cisco 6506-E core switches providing L3 connectivity to the HEAnet National Backbone, each 7124S is connected to a single 6506-E with 10GBase-SR optics. The Arista switches are connected together with 2 10GBase-SR ports aggregated into a single logical, load balanced interface. Each of the 4 backend servers of the HEAnet mirror service, ftp.heanet.ie, is connected to each switch with a 10GBase-SR link which are then aggregated together into a active/active bonded interface. All traffic between the 2 core Cisco switches is carried across the 7124S switches.

Given Arista's impressive layer 3 routing capabilities, I can't see anything being more significant in the 10 GbE switching space right now.

Paul Mullen Systems Administator HEAnet

As soon as we started testing, it was clear that the Arista 7100 was a game changer, delivering the kind of high performance and availability that heretofore would not have been possible.

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The Benefits

"Given our previous unfamiliarity with the Arista brand, we were keen to test the switch for ourselves before we decided to buy. The command line syntax proved simple and easy to learn. As soon as we started testing, it was immediately clear that the Arista 7100 was a game changer, delivering the kind of high performance and availability that heretofore would not have been possible.

Although not part of this project brief, the 7100 series' flexible connectivity and extensible granular operating system open up new deployment possibilities for future projects. With Multi and Single Mode Fibre already in place in our data centre, the 7124's ability to use SFP (small form-factor pluggable) connections in any combination of copper or Fibre, while not an immediate benefit, may prove invaluable for future projects involving client site deployment.

Similarly, the extensible operating system with open APIs (application programming interface), means that Arista switches can be used in a range of national and international academic connectivity projects where switches need to be tailored to meet a specific requirement.

