

Mobile Network Operator, Zain, Deploys Gigamon to Efficiently Scale its Network Monitoring Systems

“The beauty of the Gigamon system is that now we can connect any tool to our network, without impacting it, as well as feeding the tools with just the data they need to see. Each tool has its own requirements and Gigamon can respond to that requirement. The network is more efficient and so are our monitoring tools.”

—Mohammed A. AIMubarak, Performance Team Leader of Technical Quality, Zain

Customer Benefits

- Saved the cost of deploying unnecessary duplicated appliances
- Load balanced traffic across multiple systems
- Created a platform that enables new tools and appliances to be added quickly and simply without consuming new network ports

Gigamon Solution

- A Gigamon Visibility Fabric™ built using GigaVUE-HC2 fabric nodes equipped with GigaSMART® technology

Challenges

Zain needed to analyze the performance of its mobile network by deploying several tools that needed to be presented with different types of mobile traffic, loadbalance traffic across multiple appliances and solve the problem of connecting many tools to many network ports.

Zain's operations team includes a quality division, which collects and analyses information gathered from the network and troubleshoots any performance issues. The quality team from Kuwait wanted to analyse the performance of its mobile network by deploying several analytics tools, including a probe and a video reporting tool. The probe provides network and subscriber intelligence, enabling mobile operators such as Zain to perform real-time monitoring and troubleshooting. The video tool enables Zain to perform QoE-driven measurement of video traffic across its network. But the efficient and effective deployment of these monitoring tools presented Zain with some challenges.

The probes needed to monitor different types of mobile traffic, with one handling 2G and 3G traffic, and another monitoring 4G traffic. But the network feed combined all of the 2G/3G and 4G traffic on a single port. This meant the network would need to send the same traffic twice, once to each appliance, and the volume of traffic would have overloaded the existing appliances, requiring Zain to deploy multiple devices for each type of network, each of which would have been used inefficiently.

The video system only measures video traffic, but would be presented with all traffic types, even those of no value to it. As well as consuming unnecessary resources on the appliance, the volume of video traffic was too great for any single system, so Zain needed a way of load-balancing a single traffic feed across multiple appliances.

On top of this, it was not practical to connect multiple monitoring and analysis systems to the same network switches, which would have each required multiple mirror ports and suffered from an increased processing overhead.

Solution

Zain solved its challenges by using a Gigamon Visibility Fabric™. The fabric was built using a pair of GigaVUE-HC2 fabric nodes equipped with GigaSMART cards. Information was collected over 10GE interfaces connected to Cisco switches in the mobile network, and the appropriate data was then presented to the probes and video tools.

The Gigamon fabric segmented the different types of mobile traffic across different ports, presenting only 2G and 3G traffic to one of the probe servers and the 4G traffic to another server. The Gigamon Visibility Fabric also filtered out video traffic and load-balanced it across multiple network appliances to help enable them to scale.

Mohammed A. AlMubarak, Performance Team Leader of Technical Quality, said, “The Gigamon Visibility Fabric allows the regeneration of the same traffic to multiple destinations, and allows us to filter out unnecessary traffic, which increases our systems’ efficiency.”

Most importantly, there was now only a single connection required on the network switches, solving the challenge of connecting many tools and appliances to many network ports.

Results

Zain has saved the cost of deploying duplicate appliances to scale its monitoring systems, and been able to load balance traffic across multiple systems.

Deploying the Gigamon Visibility Fabric has also enabled new tools and appliances to be added quickly and simply without consuming new network ports. For example, Zain can now add a new system to generate SMS roaming welcome messages, simply by connecting it to the Gigamon fabric and using the fabric to select only the international mobile traffic.

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About Zain

Zain is a mobile and data services operator with a footprint in nine Middle Eastern and African countries including Bahrain, Iraq, Jordan, Kuwait, Lebanon, Morocco, Saudi Arabia, South Sudan and Sudan. Zain has a workforce of over 7,000 people, providing a comprehensive range of mobile voice and data services to over 40 million customers.

About Gigamon

Gigamon provides active visibility into physical and virtual network traffic, enabling stronger security and superior performance. Gigamon’s Visibility Platform and GigaSECURE®, the industry’s first Security Delivery Platform, deliver advanced intelligence so that security, network and application performance management solutions in enterprise, government and service provider networks operate more efficiently and effectively. See more at www.gigamon.com, the [Gigamon Blog](#), or follow Gigamon on [Twitter](#), [LinkedIn](#) or [Facebook](#).