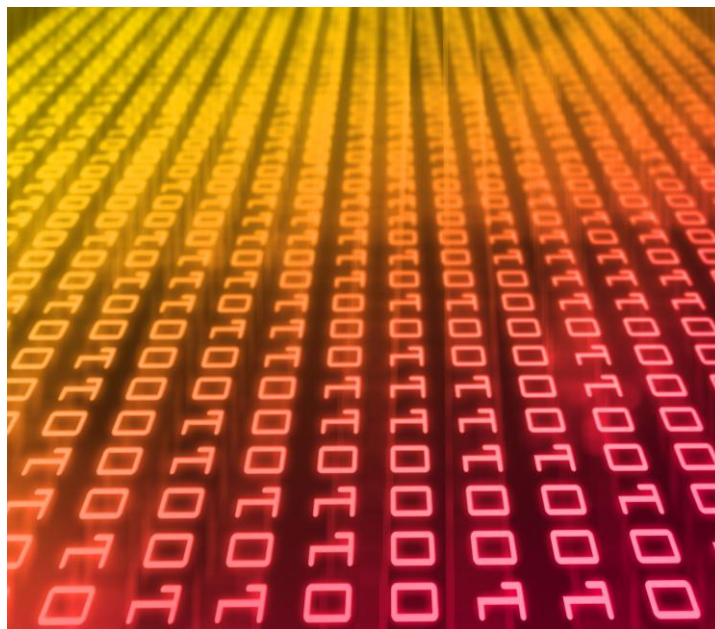


IP Network Tuning Services

Professional Services

HIGHLIGHTS

- For Broadband, IPTV, OTT and Wi-Fi operators.
- Addresses concerns around bandwidth efficiency, load balancing, link analysis, single points of failure, Quality of Service, security and firewall policies .
- Leverages ARRIS unbiased expertise.
- Allows Service Provider team to focus on strategic initiatives.
- Maximizes efficiency of current network:
 - Reduce packet discards.
 - Remove single points of failure.
 - Optimize multicast traffic flow.



SERVICE OVERVIEW

Service Provider IP networks degrade over time without proper maintenance. Misconfiguration of the network, traffic expansion that exceeds the original load design and “trial and error” configuration of the network all lead to a network that is no longer working per original specification. The result is dropped packets, slow performance and poor quality service delivery, all leading to reduced subscriber satisfaction.

ARRIS’s IP Network Tuning Services offer unbiased, vendor-independent expertise, laser-focused on the unique challenges of delivering high speed, high volume IP traffic by Service Providers. The first step is a consulting service that provides an assessment of a Service Provider’s IP network health for both unicast and multicast traffic. It results in an in-depth analysis of the current network deployment and a detailed health report with recommended improvements. The assessment can be expanded to assess network redundancy and/or network security.

IP Network Tuning is the next step and provides design and implementation of the recommended actions to ensure the IP network is performing at its optimum capability.

Service Providers face increasingly high subscriber expectations, requiring increasingly complex service delivery. Meanwhile, competition demands a rapid response to new challenges and opportunities. Often the solution requires increased efficiency and reliability in delivering IP traffic. Often, existing networking equipment is not optimized to take full advantage of its deployed bandwidth capacity. And, local expertise to provide in depth IP network optimization is sometimes not available or has higher priority tasks within the service provider's operations.

ARRIS IP Network Tuning Services

The ARRIS Professional Services team has years of experience deploying and optimizing multi-vendor IP networks for Broadband, IPTV, OTT and Wi-Fi operators. Services are available as follows:

Step 1: IP Network Consulting

ARRIS provides consulting assistance for bandwidth efficiency, load balancing, link analysis, single point of failure identification, Quality of Service strategy and security and firewall policies. Consulting begins with discovery, data collection and analysis of current state, future plans and gaps. This results in a proposed strategy, recommended solution and action plan to implement.

Step 2: IP Network Tuning

ARRIS provides IP engineering, systems integration, program management and deployment resources to implement the recommended solution including management of multi-vendor equipment and resources if applicable. Finally, ARRIS performs QA to ensure the deployed solution meets design intent.



Mini-Case Studies

IP Multicast Packet Loss IP Multicast traffic delivery inconsistent. Intermittent packet loss.

Traffic delivery was inconsistent inside and outside the existing network components. Some ingress ports discarded packets due to input buffer limitation. Delivery outside the network was impaired due to an incorrect configuration. This caused lost revenue from delayed acceptance from the MVPD. After ARRIS's recommendations were implemented the IP Multicast delivery performed without delay or packet loss, acceptance from MVPD was received and the end user had access to the high quality content.

IP Traffic Inconsistent Delivery IP Traffic stopped at irregular interval.

The network layer 2 configuration was incorrect causing the spanning tree to re-converge and blocking all traffic during the process. And, the content generation and distribution was impaired, causing poor quality video content and breaks in delivery. ARRIS recommended a better spanning tree configuration that prevented the system from blocking the traffic while maintaining a healthy layer 2 topology. The result was end users receiving high quality video content consistently.

ORDERING INFORMATION

Part Number	Description
614513-001-00	IP Network Consulting
615098-001-00	IP Network Tuning