

“An Introduction to ISP Failover and Load Balancing with GajShield UPTM”

- A GajShield Whitepaper

The Situation

Internet connectivity is at the heart of every business. Enterprises rely on the Internet to run the mission-critical business applications that drive their productivity and profits, and they expect Internet connectivity to be highly reliable and always available. Organizations running mission critical applications over the internet understand the importance of having stable, redundant and fast connections for their business needs.

If the physical connection or the ISP goes down, organizations vital link to Internet also goes down.

By maintaining only one link to the internet, they are faced with a single point of failure and serious network vulnerability. When the link fails, the organization and its customers are left with significant downtime and financial loss.

Revenue, customer satisfaction, partner relationships and employee productivity, all are at stake when internet link goes down. Internet outages impact an organization's email, websites, applications or VPN traffic.

This has forced organizations to think of an alternative to provide constant and security availability or connection to internet for business continuance.

This awareness of the need for a reliable and continuous connection has resulted in organizations opting for multiple internet connection for redundancy.

Apart from the above problem customers use **time-sensitive** applications such as VoIP (Voice over the Internet), CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning), Citrix, Oracle and **non-time sensitive** applications such as FTP, Email etc.

Customers experience that when the non-time sensitive applications like FTP and email send large files the bandwidth's are choked and the time-sensitive applications encounter performance issues reducing the productivity of the users.

The Solution

Most of the times customers will go for a better primary internet link like T1 lines or Leased Lines and the secondary link would be broadband internet links.

The optimal utilization of multiple ISP's requires advanced Policy based ISP Failover and Load Balancing to ensure uninterrupted connectivity for business critical and time-sensitive applications.

This allows the customer to distribute important applications over more robust internet links and less important applications over broad band connections and also achieve failover and load balancing for these critical applications.

ISP Link Redundancy – Failover

GajShield ISP Failover manages the traffic while providing valuable failover capabilities. That way if an internet link fails, GajShield senses the disturbance and redirects traffic to one of the working internet links.

GajShield checks the health of the available internet connections, continuously checks the status of all the internet links, detecting failures in real-time and automatically redirects the traffic to the operational internet links to guarantee full availability.

Customer can choose a granular option to define the primary internet link and multiple secondary internet links for each different service. For example for email the primary link could be ISP1, secondary could be ISP 2 and third link could be ISP3, while for FTP the primary could be ISP2, secondary could be ISP3 and third could be ISP1.

ISP Load Balancing

GajShield Load Balancing weighted round robin method and hence it distributes the traffic across multiple internet link and provides the flexibility of utilizing the total bandwidth off all the internet links preventing bandwidth bottlenecks while minimizing the cost of inefficient bandwidth utilization. At the same time GajShield detects any failure of the internet link and dynamically load balances the traffic over the available or Live internet link.

Apart from the features stated above, GajShield also support few more features which are useful for organizations. :

1. ISP Load Balancing on different internet links without the need of the ISP's cooperation and everything is transparent to the end user.
2. Policy based Bandwidth Management which can provide more bandwidth or priority for business critical applications and lesser bandwidth or priority non-business critical applications.
3. Real-time or historical view of the usage application wise, user wise or ISP wise in real time

About GajShield

Gajshield Infotech Pvt. Ltd. a provider of security solutions including Network security & Email Security for enterprise and small- to medium-sized businesses (SMBs). GajShield's Unified Performance and Threat Management Appliances give the power to organizations to improve the end-user experience in accessing information. Its patent pending technology provides an insight into the network infrastructure and helps them to make intelligent decisions.