Cisco IP Multiplexing

Product Overview
Cisco® IP Multiplexing improves bandwidth efficiency over a packets-per-second (pps)-constrained link by using proprietary multiplexing schemes to combine multiple small IP packets from a single stream, or multiple streams, into a large packet, and then sending this large packet over the pps-constrained link. A demultiplexing process is then executed by another instance of the same product on the other end of the pps-constrained link.

Cisco IP Multiplexing automatically engages when multiple packets are heading for the same destination. Prior to multiplexing, each additional voice over IP (VoIP) call would use up multiple pps slots. Multiplexing the VoIP packets from multiple calls within the same larger packet means that addition of another VoIP call stream may not require more pps slots, meaning that more of the pps slots can be used by other applications. Thus Cisco IP Multiplexing increases overall throughput over the constrained link.

Features and Benefits
- Increased bandwidth efficiency on pps-constrained lines (for example, satellite)
- Potential savings in processing load for IP Security (IPsec)-encrypted traffic
- Single-box solution
- No need to for additional piece of equipment
- Cisco IOS® Software feature, single command-line interface (CLI), and no need for additional configuration or management
- No manipulation of voice stream; codec quality is maintained
- Application-agnostic
- No need to duplicate dial plans or deal with complex call routing
- Ability to multiplex any IP packet, not just VoIP
- Other good targets, including video and other small User Datagram Protocol (UDP) streams

Platform Support
The following Cisco Integrated Services Routers (ISRs) support Cisco IP Multiplexing:
- Cisco 5915 Embedded Services Router (ESR)
- Cisco 5940 Embedded Services Router
- Cisco 819 Integrated Services Router
- Cisco 891 Integrated Services Router
- Cisco 892 Integrated Services Router
- Cisco 2901 Integrated Services Router
- Cisco 2911 Integrated Services Router
- Cisco 2921 Integrated Services Router
Cisco 2951 Integrated Services Router
Cisco 3925 Integrated Services Router
Cisco 3925e Integrated Services Router
Cisco 3945 Integrated Services Router
Cisco 3945e Integrated Services Router

Product Specifications
Cisco IP Multiplexing is a licensed software feature within Cisco IOS Software. The specific license SKUs are shown in Table 3 later in this document. The feature should be licensed on each router that will be multiplexing or demultiplexing packets. At a high level, the integration consists of the elements listed in Table 1.

Table 1. Product Specifications

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco Integrated Services Routers Generation 2 (ISR G2)</td>
<td>Router</td>
</tr>
<tr>
<td>Cisco IOS Software</td>
<td>Operating system software for router</td>
</tr>
<tr>
<td>Cisco IP Multiplexing Feature</td>
<td>Software feature that multiplexes and demultiplexes</td>
</tr>
</tbody>
</table>

System Requirements
Table 2 gives system requirements of Cisco IP Multiplexing.

Table 2. System Requirements of Cisco IP Multiplexing

<table>
<thead>
<tr>
<th>Supported Platform</th>
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<tbody>
<tr>
<td>Cisco IP Multiplexing requires a Cisco ISR G2 or ESR router</td>
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Warranty Information
Find warranty information on Cisco.com at the Product Warranties page.

Ordering Information
To place an order, visit the Cisco Ordering Home Page and refer to Table 3. To download software, visit the Cisco Software Center.

Table 3. Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FL-IPMULT-LRG</td>
<td>Feature License for Cisco IP Multiplexing on the Cisco2901, Cisco2911, Cisco2921, Cisco3925, Cisco3925e, Cisco3945, and Cisco3945e Routers</td>
<td>$8,000</td>
</tr>
<tr>
<td>FL-IPMULT-SML</td>
<td>Feature License for Cisco IP Multiplexing on the Cisco819, Cisco891, Cisco892, Cisco5915ESR, and Cisco5940ESR Routers</td>
<td>$3,000</td>
</tr>
</tbody>
</table>
Cisco Services

Cisco Services make networks, applications, and the people who use them work better together.

Today, the network is a strategic platform in a world that demands better integration among people, information, and ideas. The network works better when services, together with products, create solutions aligned with business needs and opportunities.

The unique Cisco Lifecycle approach to services defines the requisite activities at each phase of the network lifecycle to help ensure service excellence. With a collaborative delivery methodology that joins the forces of Cisco, our skilled network of partners, and our customers, we achieve the best results.

For More Information

For more information about Cisco IP Multiplexing, visit http://www.cisco.com/web/strategy/government/mobile_fixed_wireless.html or contact your local Cisco account representative.