## Network Performance & Capacity Report

**Location:** Silguri CFA, Silguri
**Vendor:** TATA COMMUNICATIONS LIMITED
**Link Type:** ILL
**Business Hours:** 09:00–18:00
**Provisioned Speed:** 10.0 Mbps

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## 1. Usage Pattern Analysis

The link is significantly underutilized, with average usage at only 4.2% of its provisioned capacity. Traffic follows a standard business pattern, with usage nearly nine times higher during business hours. However, the link experiences extremely brief but intense bursts of traffic, with a recorded peak far exceeding the allocated 10 Mbps. This indicates a "bursty" traffic profile where the connection is mostly idle but faces sudden, high-demand spikes.

## 2. Capacity Planning Recommendations

The current 10 Mbps circuit is heavily over-provisioned for sustained usage patterns. The 95th percentile of usage is only 2.13 Mbps, and the average daily one-hour peak is 2.86 Mbps. Based on this data, we recommend rightsizing the link.
- **Conservative:** 2.6 Mbps
- **Balanced (Recommended):** 3 Mbps
- **Aggressive:** 148 Mbps (Not Recommended; based on an anomalous peak)

A 3 Mbps plan would sufficiently handle typical peak loads while optimizing costs.

## 3. Performance Risks & Bottlenecks

The primary performance risk is intermittent congestion caused by high-intensity bursts. Despite high overall SLA compliance, the link experienced 492 minutes of congestion (usage over 90%), impacting performance during those periods. The recorded peak of 134.47 Mbps demonstrates that while the link can burst, these events create temporary bottlenecks and risk packet loss.

## Conclusion

The link is over-provisioned and should be downgraded to 3 Mbps to align with operational needs and reduce costs.

## Visual Insights