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## **NOTICE: New Product Names**

**The contents of this asset do not reflect our recent product name changes. Here are the new Riverbed® names:**

<b>Old Names</b>	<b>New Names</b>
Steelhead	SteelHead™
RPM, OPNET, Cascade	SteelCentral™
Stingray	SteelApp™
Granite	SteelFusion™
Flyscript	SteelScript™
Whitewater	SteelStore™

## IN BRIEF

### Industry

- » Multinational conglomerate

### Challenges

- » Employee productivity adversely impacted by network issues
- » Poor application performance in branch offices
- » Critical data at risk due to slow network backup and replication

### Solution

- » Riverbed solutions for application acceleration, mobility, and disaster recovery
- » Steelhead WAN optimization appliances at four critical locations
- » Steelhead Mobile Controller to extend WAN optimization to mobile users
- » Riverbed Central Management Console to manage all appliances centrally

### Benefits

- » Improved end-user experience and higher productivity
- » LAN-like performance for applications running over the WAN
- » More cost-effective than additional bandwidth investments
- » Considerable annual bandwidth savings per location.
- » Anticipated 10 to 12-month ROI for Domestic and international deployment
- » Infrastructure in place for future consolidation of file and mail servers



# Essar Group

## Riverbed solutions strengthen global conglomerate's IT infrastructure

The Essar Group is a multinational conglomerate headquartered in Mumbai, India. It is a leading player in the sectors of steel, oil and gas, power, telecommunications and business process outsourcing (BPO), shipping, ports, and projects. With operations in more than 25 countries across five continents, the group employs 75,000 people and has revenues of US \$ 27 billion.

### Challenge: Global expansion puts pressure on user experience

As Essar expanded its footprint into Asia, Africa, Europe, the Americas, and Australia, the number of branches and applications grew, putting pressure on the company's ability to deliver an acceptable user experience across the wide-area network (WAN). Some remote offices are located in regions with low or insufficient bandwidth, for example, while others experience high latency during data transfer. This meant frequent disconnections, downtime, poor application performance, and packet drops, causing frustrations for end users. Slow data backup and replication from the remote offices was another concern.

CTO Office Group at Essar realized that performance solutions addressing network challenges like high throughput and low latency were essential for the smooth functioning and productivity of the organization. They considered purchasing more bandwidth to achieve this but realized that it was expensive, both in terms of the recurring bandwidth charges as well as the need to buy additional equipment, such as routers.

**“Riverbed offers a range of Steelhead appliances that enable applications running over the WAN to behave with LAN-like performance.”**

An evaluation of alternative solutions revealed that WAN optimization would be a scalable and more cost-effective approach. It would provide the most effective use of the available bandwidth, improving the performance of business-critical applications as well as disaster recovery capabilities. In addition, WAN optimization would enable Essar to scale the infrastructure as the business grew without interruption to users or costly infrastructure upgrades in the future.

### Solution: WAN optimization with support for mobile users

The IT team at Essar considered two solutions: Steelhead® appliances from Riverbed Technology and another WAN Optimizer Solution. They chose the Steelhead solution based on on-site proof-of-concept results. They found that the installation of Steelhead appliances was much easier.

Market data also played a role in the decision to go with Steelhead appliances.

“We were looking for a robust and scalable technology to address ever increasing WAN bandwidth requirements and improve application performance to add user delight where we noted Riverbed® as the leading provider of WAN optimization solutions with about half the market share in the category it pioneered.” says Jayantha Prabhu, Chief Technology Officer, Essar Group. “Another important consideration was the fully integrated solution for extending WAN optimization to mobile users – Riverbed Steelhead® Mobile Controller appliance.”

“Riverbed offers a range of Steelhead appliances that enable applications running over the WAN to behave with LAN-like performance,” says Keyur Desai, Associate Vice President, IT Infrastructure & Projects Group, Aegis Limited, Essar Group. “In addition, we can utilize the same device for QoS [quality of service] and traffic shaping.”

The IT team at Essar Group deployed Steelhead appliances and Steelhead Mobile Controller appliances at the organization's crucial locations, which include Gujarat and Mumbai in India, and Canada. The appliances were placed in-path between the LAN switch and the router. Seven people in Essar's in-house IT Infrastructure team carried out the implementation with support from BT Global Communications and M.Tech Solutions.

To provide WAN optimization for mobile users, the team installed a Steelhead Mobile Controller appliance at one of their key office location in India, along with Steelhead® Mobile software on the users' laptops. "This is optimizing traffic from mobile users, and is also useful for the remote branch locations where a Steelhead appliance is not installed," explains Desai.

Management of the Riverbed appliances is done using the Riverbed® Central Management Console (CMC). "This allows us to centrally manage the Riverbed appliances as well to prepare historical reports," Desai adds. Essar has a large network and it is common in this case to have asymmetrically routed traffic where managing and deploying the solution is difficult.

"The Riverbed Steelhead Solution has allowed us to drive our cost saving initiatives with improved user productivity and considerable savings with overall MPLS bandwidth consolidation," Prabhu adds.

### Benefits: Cost savings and improved productivity

Based on one month's bandwidth (BW) utilization, the Essar Group has calculated tremendous savings achieved by the Riverbed deployment. Return on investment for the Riverbed deployment is estimated to range from 14 to 27 months, depending on the location of the appliance. However, ROI may actually happen sooner. "Currently by optimizing only 50 to 65% of the overall traffic, Essar is saving considerable amount per year in bandwidth costs at each location.

Once we start optimizing Citrix ICA and SSL traffic, we expect to optimize an additional 10% of the traffic. Hence the savings will further increase and the payback will reduce the time to ROI for the Riverbed deployment in India to approximately 12 months," Desai notes.

Essar also benefits from other capabilities of the Steelhead deployment. These include application acceleration for the broadest range of enterprise applications, web caching, optimization of all TCP, less time required for data transfers, increased LAN-side throughput, and improved WAN utilization, which means more virtual bandwidth. The appliances also guarantee a minimum bandwidth for latency-sensitive application traffic.

The company also reports that the end-user experience over the WAN has been enhanced by the deployment of Steelhead appliances, improving productivity among employees in branch offices.

The Riverbed deployment will also support Essar's plan to consolidate its file and mail servers to one or two data centers. This will produce further savings by reducing costs for hardware and software management.

### About Riverbed

Riverbed delivers performance for the globally connected enterprise. With Riverbed, enterprises can successfully and intelligently implement strategic initiatives such as virtualization, consolidation, cloud computing, and disaster recovery without fear of compromising performance. By giving enterprises the platform they need to understand, optimize and consolidate their IT, Riverbed helps enterprises to build a fast, fluid and dynamic IT architecture that aligns with the business needs of the organization. Additional information about Riverbed (NASDAQ: RVBD) is available at [www.riverbed.com](http://www.riverbed.com).



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### SUMMARY

As part of its international expansion, Essar Group acquired remote offices in regions with network limitations that would hurt user productivity. The resulting disconnections, downtime, and poor application performance frustrated end users and compromised data backup and replication efforts.

Research into possible solutions revealed that WAN optimization would cost less than adding bandwidth. The company chose Riverbed Steelhead WAN optimization appliances over other competitor products due to Riverbed support for mobile devices, which other products did not offer as an integrated solution.

Essar originally deployed Steelhead appliances and Steelhead Mobile Controller appliances at five crucial locations. The company reports considerable annual bandwidth cost savings at those locations, for a 14 to 27-month ROI. (That ROI may eventually drop to 12 months in existing ROI once they start optimizing Citrix ICA, Video streaming and SSL traffic). The solution has improved the end-user experience over the WAN, boosting productivity among employees in branch offices.