

CASE STUDY

Global auto parts manufacturer boosts WAN performance over 41X between South Korea and the US

Highlights:



INFAC

INFAC Corporation

Location: South Korea, with branches in the US, Mexico, China, India and Vietnam



- INFAC manufactures parts for GM, Chrysler, Kia and Hyundai. Poor WAN performance between headquarters and branch locations severely damaged productivity. As a result, delivery schedules weren't met, and automakers threatened to replace them.
- INFAC tried upgrading bandwidth and evaluated a leading vendor's WAN optimization tool, but saw little benefit. In many instances, performance was worse.
- *WarpEngine™* delivered massive performance gains across all locations, with greater than a 41X improvement between South Korea and the US – their most important foreign market.

Challenge: Bandwidth Upgrade and Well-Known WAN Optimization Tool Fail to Deliver

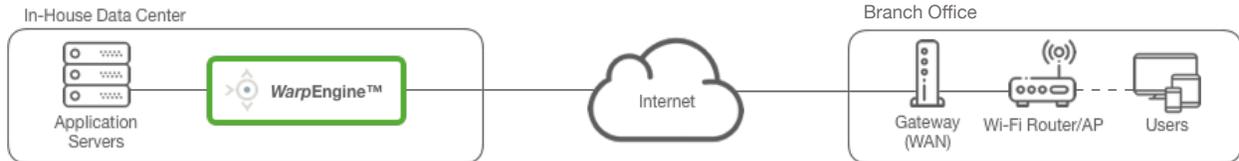
INFAC, headquartered in South Korea, manufactures parts for leading automakers including GM, Chrysler, Kia and Hyundai. They were on a rapid growth trajectory pushing them into China, India, Vietnam, Mexico and the United States. Computer systems were centralized at headquarters, with overseas branches relying on slow WAN connections. As employee productivity suffered, delivery schedules slipped, which was unacceptable in a just-in-time manufacturing environment.

To avoid losing customers, they tried to speed up the network by upgrading bandwidth. When their upgrade didn't perform as expected, they tested a leading WAN optimization solution that relied on compression, deduplication, and caching. These techniques can accelerate some types of traffic by reducing bandwidth usage. However, they aren't as effective at dealing with today's increasingly jitter-prone streaming services, IoT, voice, video and web applications that transmit data in unpredictable bursts. Network protocols interpret jitter as congestion, slowing traffic to avoid data loss until throughput collapses and applications stall, even when plenty of bandwidth is available. In fact, adding bandwidth often increases the incidence of jitter-induced throughput collapse.

Another challenge is that over 80% of network traffic is now encrypted. This means an optimization tool that needs unencrypted payload access for deduping and compression offers little value, and often makes performance worse. It can do nothing for data that's already compressed, and introduces encryption/decryption delays at each endpoint, slowing performance and increasing jitter. Finally, because the solution had to be implemented at both ends of the network, INFAC realized it would add significant maintenance overhead, as well as the security risk of exposing sensitive encryption keys at every branch.

Solution: WarpEngine™

Once INFAC learned about WarpEngine™, they gave it a try. WarpEngine™ leverages Badu Networks' patented technology to deliver improvements of up to 10X or more in performance and throughput by filtering out the impact of jitter, today's most common cause of network throughput collapse. WarpEngine's algorithmic approach to network optimization doesn't rely on deduplication or compression, so it requires no payload access. This enables WarpEngine™ to accelerate all types of traffic – encrypted, unencrypted or compressed without the performance and maintenance overhead, as well as the security risks of competing dual-ended solutions. WarpEngine™ is single-ended and can be installed anywhere on the network. It requires no changes to clients or servers, and no costly and disruptive bandwidth upgrades. WarpEngine™ also works in conjunction with existing optimization, SD-WAN, and ADC solutions.

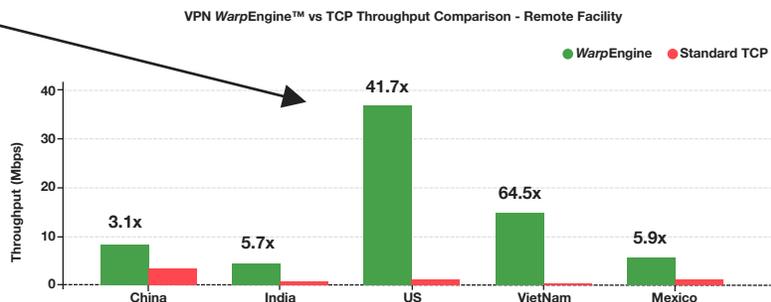


For INFAC, WarpEngine's impressive performance numbers, easy installation and low cost made it an obvious choice, especially in comparison to the cost of further bandwidth upgrades and expensive dual-ended WAN optimization tools that offered little value in return.

Results: Over 41X Improvement in Performance



- Performance improvements ranged from 3.1X in China, to an amazing 64.5X in Vietnam, with an impressive 41.7X in the US – the most critical new market for their global expansion. Results for all locations are shown in the graph below.
- Branch location employee productivity reached the same levels as headquarters, and parts delivery schedules to automakers were consistently met.
- Dramatic reduction in administration and maintenance overhead, since WarpEngine™ only needed to be installed at their corporate data center.



Resources: [About WarpTCP™ Technology](#) [About WarpEngine™ Appliance](#) [Request a Free Trial](#)



Founded in 2012, Badu Networks has become the market leader in network optimization solutions with our patented WarpTCP™ technology that delivers up to a 10x improvement in performance and throughput.

www.badunetworks.com

2640 Main Street, Irvine, CA 92614

info@badunetworks.com

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