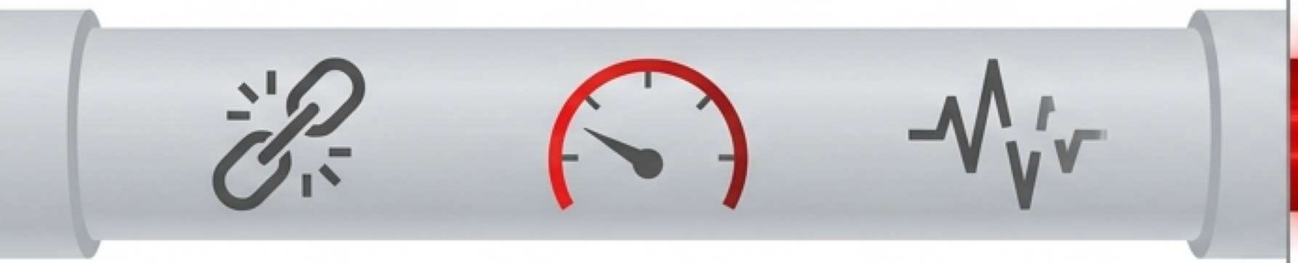
comBOX
MULTI-WAN SERVICES

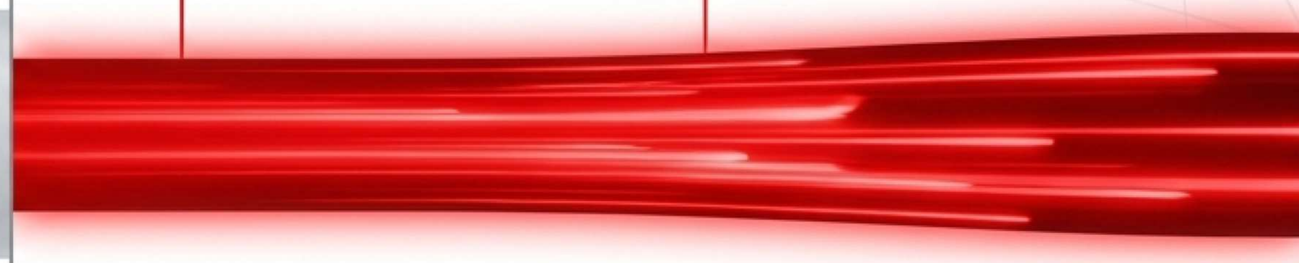
Module 1: Introduction to comBOX VLL

The Architecture of Reliable Connectivity

comBOX Certified Partner Program (CCPP)

The Vulnerability of Single-Link Networks



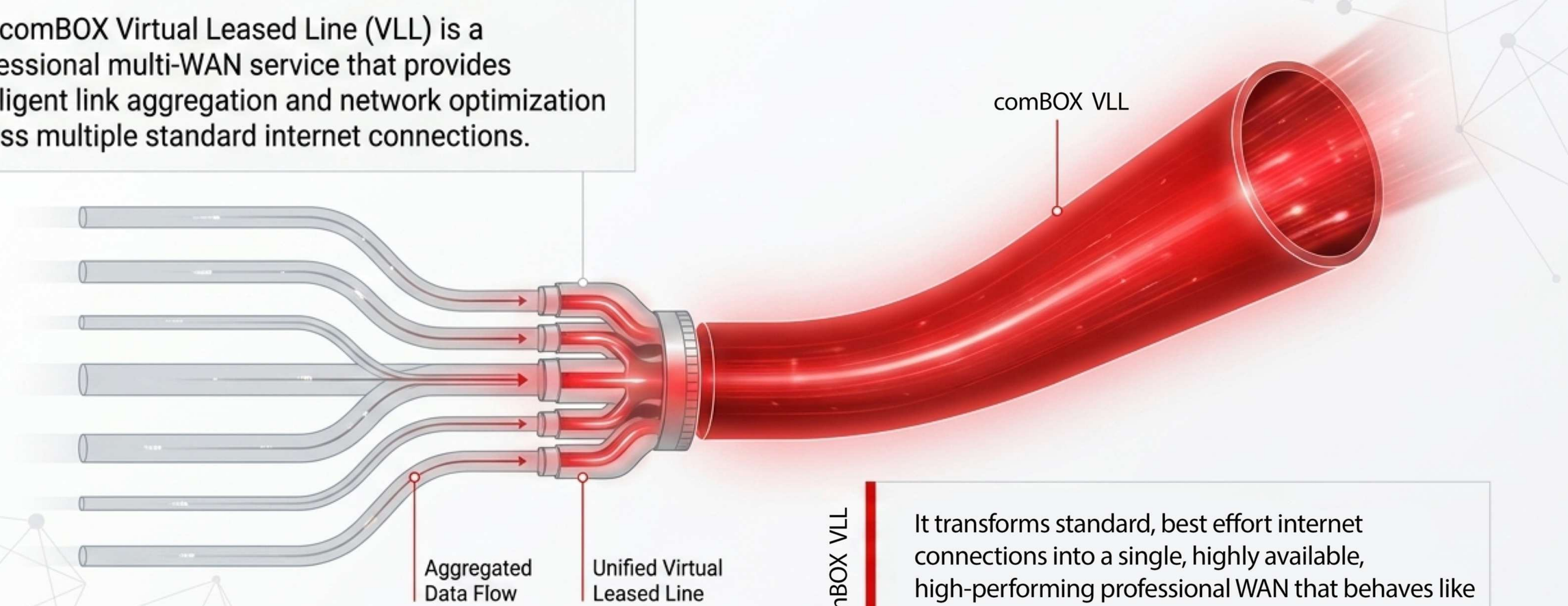


Traditional physical leased lines are prohibitively expensive, while standard single-link WANs suffer from bandwidth caps, unpredictable latency, and catastrophic single points of failure.

Modern enterprise operations demand connectivity that simply does not fail, regardless of individual ISP performance.

What is comBOX VLL?

The comBOX Virtual Leased Line (VLL) is a professional multi-WAN service that provides intelligent link aggregation and network optimization across multiple standard internet connections.

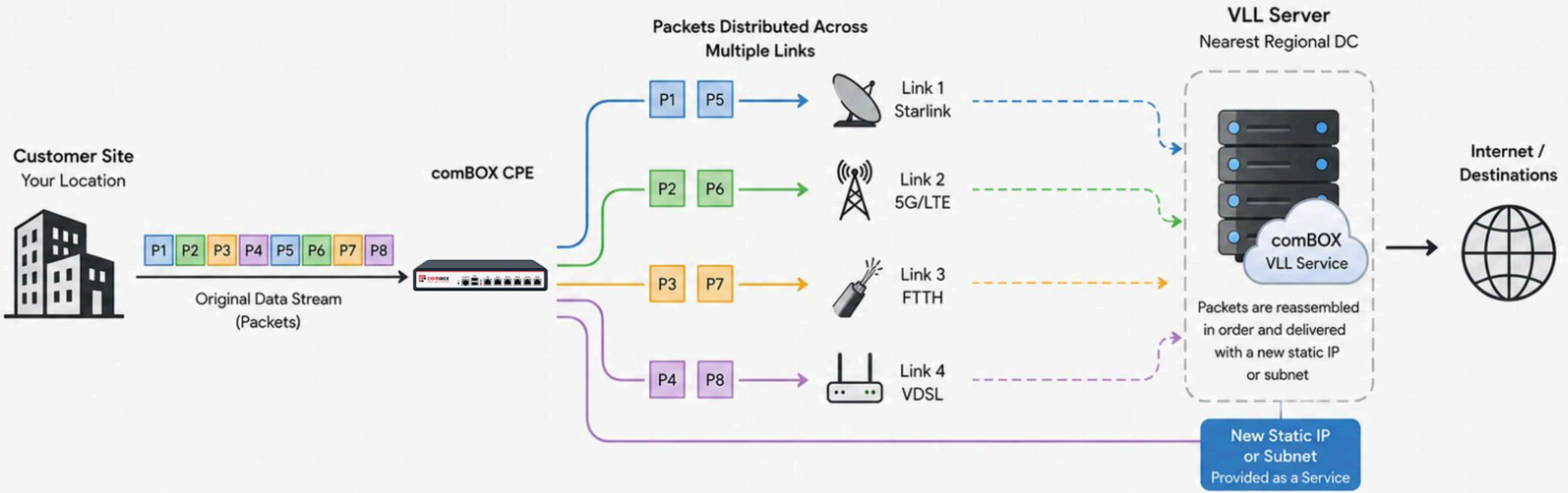


comBOX VLL

It transforms standard, best effort internet connections into a single, highly available, high-performing professional WAN that behaves like a premium dedicated physical line.

Packet-Level Bonding in Action

Packets are split across multiple connections at the packet level and reassembled in the nearest data center.



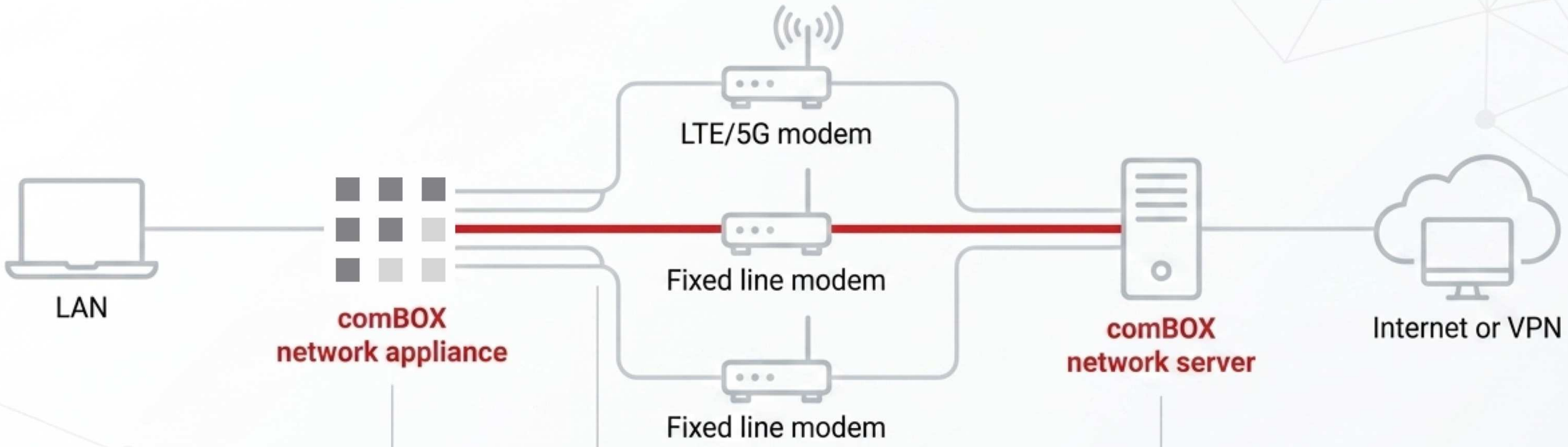
How It Works

1. Data is broken into small packets.
2. Packets are distributed across all available links.
3. Each link sends its assigned packets independently.
4. Packets arrive out of order…
5. …and are reassembled in the nearest DC (VLL Server).
6. Traffic is delivered to the internet with a new static IP or subnet.

Benefits

- Maximizes bandwidth usage
- Improves speed and reliability
- Overcomes latency and jitter
- Ensures seamless, uninterrupted connectivity
- Delivered as a Service with a new static IP or subnet

End-to-End System Topology



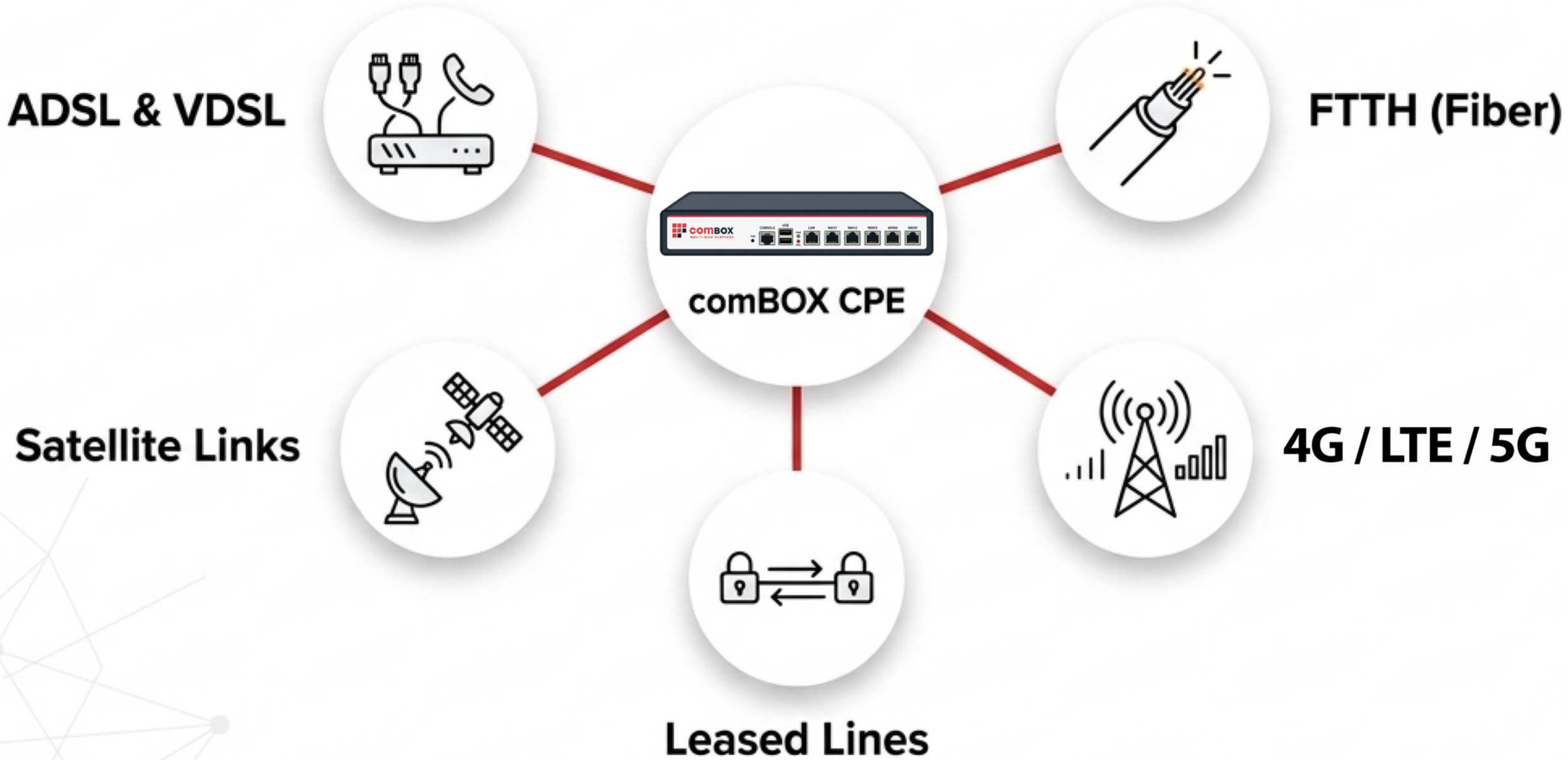
1. The intelligent edge appliance routing traffic, compressing data, and distributing packets across available links.

2. The aggregated physical connections transporting the encrypted VLL tunnel.

3. The central anchor point that reassembles packets and provides a static IPv4 presence to the internet.

Universal Carrier Agnosticism

comBOX VLL does not care who the ISP is or how the data travels.
It seamlessly integrates any mix of available technologies.



Purpose-Built Edge Hardware





Tabletop & Rackmount (BR Series)

Supporting up to 7 integrated WAN legs and capable of up to 2.5 Gbps max bonded throughput (BR-725 model).

Includes support for external USB LTE Quectel CAT6 modems.

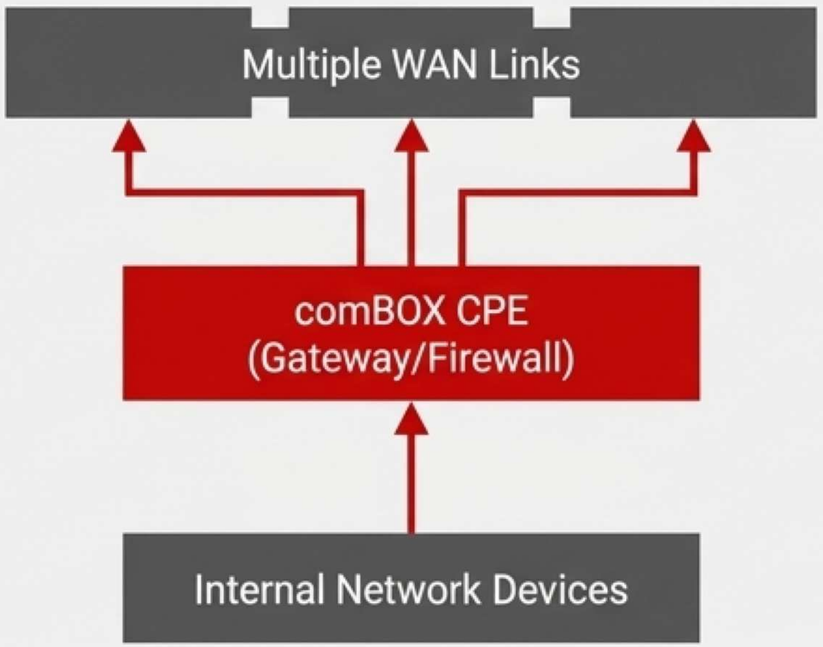


Custom Appliances

The Mobile Travel Case integrates 6 LTE CAT6 modems for instant, high-capacity bonded connectivity in remote or temporary environments.

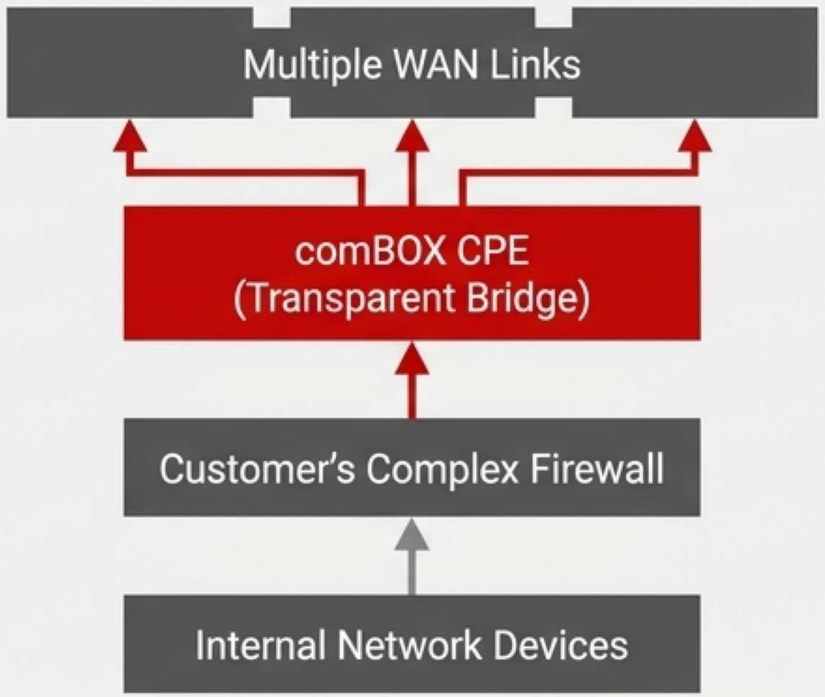
Flexible Deployment Scenarios

NAT Mode



The comBOX network appliance functions as the edge firewall and gateway for the internal network, performing Network Address Translation and enforcing perimeter security.

Bridged Mode



The appliance functions as a transparent bridge. Static IP addresses are forwarded directly to the internal network, allowing seamless integration behind complex, pre-existing enterprise firewalls.

Core Customer Benefits

99.9% Uptime

comBOX VLL delivers 99.9% uptime through intelligent link redundancy and automatic failover, ensuring continuous connectivity and uninterrupted business operations.

Increased Bandwidth

comBOX VLL combines multiple Internet connections into a single high-performance virtual link, increasing available bandwidth while maximizing the value of existing network infrastructure.

Zero Packet Loss

comBOX VLL minimizes packet loss with intelligent packet duplication and retransmission, delivering reliable performance for voice, video, and mission-critical applications.

Advanced QoS

comBOX VLL provides advanced Quality of Service (QoS), intelligently prioritizing critical business applications to ensure optimal performance and a superior user experience.

VLL Service Bundles

Scalable capability tiers engineered to match specific bandwidth and redundancy requirements.

	Bronze	Silver	Gold	Platinum	Platinum+
Max Bonded Throughput	100 Mbps	250 Mbps	500 Mbps	1 Gbps	2 Gbps
Supported WAN Legs	Up to 5	Up to 5	Up to 7	Up to 7	Up to 7
1 Static IPv4 included across all tiers.					

Key Takeaways

Ultimate Reliability

By aggregating diverse WAN links and deploying intelligent failover, comBOX VLL eliminates single points of failure.

Hardware Flexibility

From rack-mounted enterprise edge appliances to rapid-deployment mobile cases, the hardware adapts to the environment.

Scalable Tiers

Five distinct service bundles (from 100Mbps to 2Gbps) allow partners to right-size the solution for any client's performance demands.

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