

Resilient connectivity for the Tactical Warfighter

Multi-transport networking built to operate through denied, degraded, intermittent, and limited conditions

Executive summary

Modern operations run on data, and in contested environments the network carrying it cannot be taken for granted. Denied, degraded, intermittent, and limited (DDIL) conditions are the baseline planning assumption, not the edge case. VersaONE is built on that assumption. It runs a software-defined wide area network (SD-WAN) fabric across every available transport, measuring each link continuously and moving traffic to the best path with no operator in the loop. A node cut off from the control plane keeps passing traffic on the policy it holds locally, and every tunnel is encrypted end to end. The same software runs on a backpack node at the edge and a 100 gigabit per second gateway in garrison.

Tactical networking challenges

Tactical communications operate under conditions that enterprise networks never see.

Operations run on data	DDIL is the baseline condition	Legacy kit was not built for this
 Position location information, command and control, and imagery all ride the network. When a link drops, the formation does not lose a convenience. It loses shared situational awareness at the moment it matters.	 Electronic warfare is a reality of the modern operating environment. Links get jammed, masked by terrain, degraded by weather, or lost outright. The requirement is to operate through those conditions, not wait them out.	 Most tactical networks hang off a single primary transport, with failover that is manual when it exists at all. That design assumes the network will be up and an operator will be free to fix it when it is not. Neither assumption holds in contested, mobile, austere environments.

The Versa solution

VersaONE: Designed for contested conditions

VersaONE is built for DDIL conditions from the outset. It rides multiple transport underlays at once and keeps passing traffic when the control plane is unreachable. One box at the edge handles transport, routing, and encryption, and the same software runs from backpack nodes to gateways in garrison.

Traffic steering with no operator in the loop

VersaONE continuously measures latency, jitter, packet loss, and usable bandwidth on every link, whether satellite, cellular, line-of-sight radio, or wired, and steers each application flow to the best available path at that moment. Mission-critical flows like position location, command and control, and imagery ride dedicated service-level policies.

Multi-hop relay across the formation

A moving formation cannot count on every node having a direct path back to the command post. VersaONE nodes relay through one another automatically, daisy-chaining across vehicles and dismounted kit to hold end-to-end connectivity when direct paths are gone.

Encryption that does not trust the transport

In a contested radio frequency environment, the transport layer cannot be assumed secure. VersaONE maintains end-to-end encrypted tunnels between every node, independent of transport, so intercepted traffic yields no intelligence value.

Key capabilities

- ✓ **Multi-transport SD-WAN**
Continuous measurement of latency, jitter, packet loss, and bandwidth on every link. Each flow steered to the best path with no operator in the loop.
- ✓ **Multi-hop relay**
Nodes relay through vehicles and dismounted kit automatically, holding end-to-end connectivity when direct paths are gone.
- ✓ **Disconnected operation**
Separated control and data planes. A cut-off node keeps forwarding on locally held policy until the link is restored.
- ✓ **End-to-end encryption**
Encrypted tunnels between every node, independent of transport. Intercepted traffic yields no intelligence value.



About Versa

Versa, a global leader in SASE, enables organizations to create self-protecting networks that radically simplify and automate their network and security infrastructure. Powered by AI, the VersaONE Universal SASE platform delivers converged SSE, SD-WAN, and SD-LAN solutions that protect data and defend against cyberthreats while delivering a superior digital experience. Thousands of customers globally, with hundreds of thousands of sites and millions of users trust Versa with their mission critical networks and security.

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