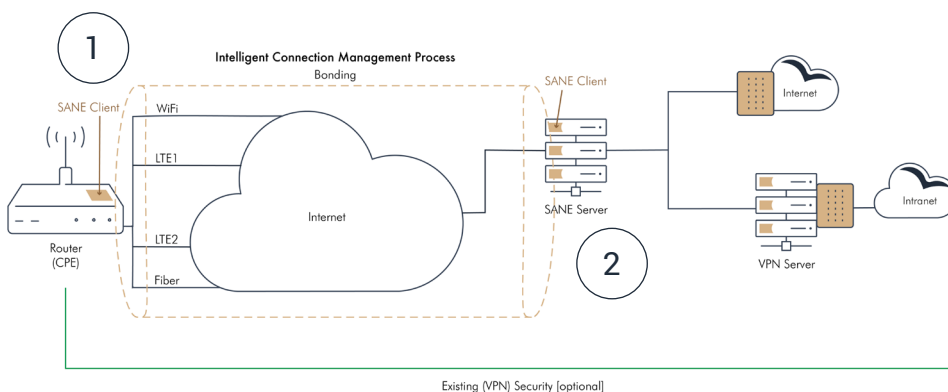# bondix
intelligence

BONDING DONE SMART

SD-WAN AT ITS BEST

While highspeed Internet is available almost anywhere by now via fibre and 5G, the need for reliable connectivity is ever growing. Bondix Intelligence developed its Simple Aggregation of Networks, or short: S.A.NE, software to ensure you stay online: It combines at least two WAN links on routers that were not originally designed to do so.

S.A.NE is supported on Teltonika, Advantech, AnyRover, and many other OpenWRT-based router models, and allows you to combine different WAN interfaces and providers for aggregation, load balancing or seamless handover. It can be installed with the click of a button and is easily configured with a downtime of only seconds.

HOW IT WORKS

S.A.NE Architecture

Bondix S.A.NE Bonding happens between the S.A.NE client (1) on your supported router and a S.A.NE server (2), hosted either by Bondix partners or by yourself. The client software combines all existing WAN interfaces of any type of WAN medium into a virtual tunnel. In this example, the tunnel is established via WiFi, two different 5G/LTE connections and fibre. This virtual tunnel uses the S.A.NE server as a relay, from which the data is then forwarded to the Inter- or intranet.

S.A.NE

Simple
Aggregation of
NEtworks

BENEFITS

EASILY INSTALLED

COST-EFFECTIVE

HARDWARE-AGNOSTIC

BECAUSE SMARTER IS BETTER.

BONDING OPTIONS

- **Seamless failover**
  One WAN link is used, all WAN links stay connected.

- **Load balancing with seamless handover**
  All WAN links are used, each one for a different application.

- **Bonding (WAN aggregation)**
  All WAN links are used and their bandwidth is combined.

- **Packet duplication**
  Replicates data packets on two or more WAN links.

BUILT-IN INNOVATION

One-Click Tunnel Configuration
Set up your tunnel in seconds with the S.A.NE connection code.
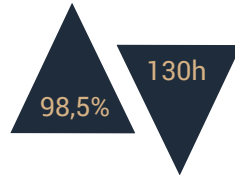
Server Geo-Redundancy
Local servers keep downtime at an absolute minimum.

VPN Support
Choose your preferred VPN solutions to use with S.A.NE.

RELIABILITY BOOSTER

98,5% **130h**

Most providers offer an SLA of 98,5% for their connections, which means they could be out for about 130 hours without compensation. Usually, outages don't wait for weekends, and they don't accumulate–lots of lost business.

With S.A.NE, you can increase your connection reliability to 99,6% with only 36 hours outage by aggregating two fixed network or wireless WAN links and using two S.A.NE servers for failover. Or, you combine two S.A.NE-capable routers with two servers and go even higher up to 99,99% with less than an hour.

99,99% **<1h**

ADDITIONAL FEATURES

S.A.NE Bonding Proxy	Our secret ingredient. Ensures best-possible performance of your bonded connection.
Satellite Mode	Allows higher data throughput where WAN link characteristics are vastly different (e.g. satellite and 5G).
S.A.NE Latency Smoothing	Sends interactive, low-bandwidth streams over the fastest link, while bulk traffic is distributed over all WAN links, for stable latency.
Optimal use of available WANs	S.A.NE automatically utilizes additional WAN links on peak bandwidth demands, keeping them on stand-by otherwise.
WAN Prioritization	Allows manual and automated prioritization of WAN links according to latency or cost to ensure most cost-effective use.