SD-WAN

DATASHEET

FatPipe Networks
3rd Floor, Ragula Tech Park, Type II/16, Dr. VSI Estate (Phase 1), Thiruvanmiyur, Chennai - 600 041 India
www.fatpipeinc.com • info@fatpipeinc.com • Tel: +91 44 6670 7200

FatPipe SD-WAN Solution:

- Seamless session failover in sub-seconds for session continuity using our patented technology. Ensuring clear and superior VoIP and video traffic.
- Granular data/session prioritization over multiple carrier lines.
- Selective encryption across the overlay fabric, not "double encryption" (which impedes session performance). FatPipe holds a patent on this technology.
- FatPipe architecture ensures that even if a remote Orchestrator is unavailable due to outages, the local boxes will continue to operate and transmit data efficiently.
- FatPipe load balances on Layer 3, and is compatible and future proofed for IoT, Layer 2 fabric, etc.
- Single pane of glass management.

SD-WAN for HQ/Branch Site Redundancy & Load Balancing:

- **Deploy FatPipe SD-WAN solution** into network, to pass traffic on all available links.
- **Load Balance traffic** on all available paths and Automatic Failover to additional lines, in case of link failure, ensures uninterrupted service availability. All lines in active/active state.
- **Internet circuits at HQ and all sites with FatPipe appliances can now be used as failover for DIA circuits**, with secure transmission over public connections, with FatPipe patented MPSec encryption.
- **Provide for fast turn on of branch connectivity to main site/DCs,** using whatever Internet circuits are available (DIA, MPLS, Ethernet, broadband, cable, wireless, microwave, satellite, etc.).
- **Enable Orchestrator with Central Policy Propagation** to centrally control WANs and easily manage branches and branch deployments.
- **Branch appliances "phone home" for auto configurations** and policy-based routing rules.
- **Zero downtime is assured** as long as one link at the site is up and running.
- **IPSec tunnels terminate at the appliance for VPN functionality.**
- **Active link monitoring** for available bandwidth, latency, jitter and packet loss allows FatPipe to send traffic on the best path with better characteristics.
- **Prioritize outbound sessions** with FatPipe policy-based routing, ensuring high priority sessions have the required bandwidth.
- **Granular control of VoIP, Video, Skype, Lync, etc.** –with multiple options to define an application. (Source/Destination IP, ADS user, Source/Destination Port, Protocol, Pre-classified DSCP markers.)
- **Fail-to-Wire configuration**, in highly unlikely event of component/unit failure. Optional HA Paired units.

Multi-Line WAN Aggregation:

- **Sub-Second Stateful VoIP Failover.** Patented technology fails VoIP traffic over in a sub second without dropping the call. With FatPipe, VoIP and other traffic are sent over ONE line only, and if that line fails, the data automatically fails over to another other line instantly. (Other vendors will send the same VoIP traffic over two lines, and whichever data reaches first is selected. Duplicating VoIP traffic causes clogging and inefficient traffic flow for offices that handle multiples of calls being placed simultaneously, or PBX and cloud services.)
- **Stateful Sub-Second Session Failover.** Patented technology works similarly for all data traffic and is especially valuable for companies that use Oracle and SAP. FatPipe automatically fails over all data sessions without dropping them when a line fails. This is important when production monitoring data is transmitted live. If a line fails in the middle of a transaction, the transaction is failed over without causing a loss of data.
- **True Outbound Load Balancing,** rather than just placing data session on two lines. Maximizes the data traffic and speeds up data transmission resulting in better ROI.
- **Rotating IP address Support**, Usually ISP lines with rotating/dynamic IP addresses are less expensive, and so small branches may be able to use them cost effectively.
- **Multiple Orchestrator Options**, can be in-band (on the customer's networks for security), Hosted (data center outside the customer's network), or Cloud Hosted as a service. Depending on the customer security requirements.
- **Built-in Firewall** appliance to be a single box solution.
- **No Data Plane Backhaul,** data does not have to leave the network if desired/required.
- **Threshold-Based Session Failover,** - based upon variable parameters (latency, jitter, packet loss) that you apply and set for specific applications (VoIP, Skype, Salesforce, O365, e.g.) to ensure the session follows the best path for that application.

Protocols Supported	IPSec, MPSec, VRRP, Routing Protocol (BGP/static/OSPF), SNMP V3, NTP, LACP, 802.1Q, FEC, SNAT, DNAT, IPv4, IPv6, Dual Stack, Application Aware Routing (well-known & custom-defined)
Load Balancing	Packet-based, session-based, Application-specific interface priority, Selective-Encryption, upto 15 heterogeneous (MPLS, Point-to-Point, Broadband, 4G, VSAT etc) path load balancing, Threshold-based switchover (Latency/Loss/Jitter), Link-Stabilization Factor, MPSecTM Path Monitoring, Seamless Failover without session-drop (Session-based load balancing only)
Integration Support	Active Directory, LDAP, TACACS, RADIUS, PIMS, Rest API's for SIEM, NMS, Syslog
QoS Mechanisms	Traffic Class, IP Precedence, DSCP, CBWFQ, LLQ
Certification	FIPS 140-2
Security	Encryption (AES-128, AES-256, 3DES, SHA-1, SHA2-256, SHA2-512, MD5, DH Group 2-18), Stateful Firewall, Geo Blocking, FQDN (domain) Filtering, WAN Services Blocking (HTTPS/SSH/SNMP/ICMP/DNS/Access-List etc)
IPV6	Dual Stack (IPV4 & IPV6), Natting, IPv6 Addressing, Name Resolution, Neighbor Discovery, ICMPV6, IPV6 DHCP, OSPFV3, BGP Routing support for IPV6
Other Features	Packet Capture (tcpdump), iperf (throughput on private Line), Speed Test (throughput on Public Line), live session monitoring, Scheduler (time-based policy)

Visibility

- FatPipe WAN visibility, management and Reporting with Enterprise Dashboard View.

Deployment

- Pre-deployment meetings, whiteboard sessions, and Visio diagrams to outline complete installation, deployment, and support.
- Collaborated efforts on staging, infrastructure configuration, testing, turn up and installations.

Delivery Timelines

- Unit delivery: International shipping delivery timetables apply
- Installation: One-week turnaround.

Hardware Specifications

Hardware	STD-4U (2240-B100G)
Device Type	STD-4U (Hub / Headend Unit)
Form Factor	2U
Operating System	64 Bit
Power Supply	Dual - 500W Max each
CPU	Intel Xeon 6338 32-core 2.3GHz with AESNI or Equivalent
RAM	128 GB
Data Storage (SSD)	256 GB
Included Ports	16 (1G/10G/100G)
Fiber Ports	4 x 100G with MM QSFP 12 x 10G with MM SFP+
Max. Ports	16 (1XPCIe16 slot, 8 Port Gbe Onboard), Convertible
Expansion Slots	4
HW Dimensions (L x W x H)	17.7”x 16 7/8” x7”
Shipping Dimensions (L x W x H)	22" x 24" x 13"
Shipping Weight	45 lbs
Operating Temperature	0 - 50 deg C
Non - Operating Temperature	-20 - 80 deg C
Humidity	10% - 90%
Maximum WAN Throughput	100 Gbps
USB ports	2
Mounting Rail Kit	Yes
No. of Routing Table Entries	2.1 Million
No. of IPSec Tunnels	9000
MTBF	70000 Hours
Jumbo Frames (bytes)	9000
No. of Segments	30

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