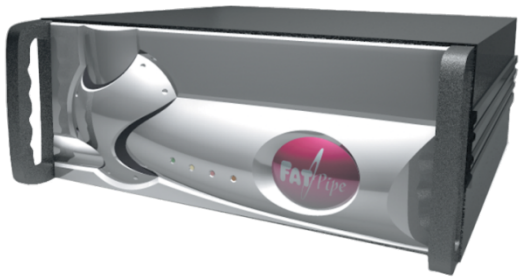
FatPipe Networks
including SDWAN Technology



Company Overview

WHO WE ARE

A leader in enterprise class application aware, secure SD-WAN FatPipe Networks is a founder-led company based in Salt Lake City that pioneered multi-line, innovative SD-WAN, cloud and hybrid cloud disaster recovery and business continuity solutions

WHY WE DO IT

We want to help our customers automate and build agile and resilient networks by using our unique and patented solutions

WHAT WE DO

FatPipe provides customers with dramatically lower TCO for their mission critical networks by providing maximum residency and automation

HOW WE DO IT BETTER

We have been a pioneer in WAN redundancy technology - FatPipe offers programmability, enhanced automation and deep analytics resulting in seamless user experience

HOW WE DO IT

FatPipe is a technology leader and has developed a portfolio of 13 patents representing 180+ unique technology claims from SD-WAN to cloud resiliency management and addressing future IoT networking needs

OUR CUSTOMERS

Our products have been deployed by thousands of customers across multiple industries including financial services, healthcare and manufacturing are relevant to enterprises operating communication infrastructure across multiple locations

FAT Pipe

WHO WE ARE

- HQ in Salt Lake City (Utah) - offices in the USA, and around the world
- In continuous business since 1995
- Inventors of Hybrid WAN (SD-WAN)
- Providing Hybrid/SD-WAN products since 2000
- Innovating, and deploying hybrid WANs for more than a decade.
- Over 12,000 successful customer deployments.
- 13 seminal patents with over 180 technical claims.

Over 40 Awards
and Commendations

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WHY SDWAN ….1

Network Transformation

- Network Refresh has been the trend with Businesses going for e-enabling users with high performance applications from anywhere for higher resiliency and uptimes

Adaptability to real time traffic

- Availability of right Information at right time with Application-level control and Quality of Service with WAN op techniques for Accelerated traffic

Unifying Disparate Devices

- At present there are separate hardware devices for Routing, Security aka Firewalls, Load Balancing and WAN Optimisation
- Need for unifying these into one

Familiar Scenario – Multiple Fibre Cuts

- Multiple Fibre Cuts in Developing Countries due to Infra works
- Create Convergence in Telco Networks which often take multiple seconds in many cases for traffic diversion
- Flap for end user causing dissatisfaction

Routing Protocols do not have end to end visibility

- BGP, OSPF etc have visibility of Next Hop/AS and do not have end to end visibility
- New Age solutions require complete path visibility for granular control of traffic

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WHY SDWAN ….2

Enhanced ++ Security	• Transactions shall be more secure in today's vulnerable Network environment
Internet has improved and is less costly	• Quality of Internet has improved and is available at approx. R99/month • It can be made SLA driven with Security and QoS for Enterprise Apps
App adaption by Businesses on Hybrid Cloud	• The era of SaaS , Iaas and Paas is moving apps to Cloud and Enterprise access from Internet • Need for unifying these into one Network/Device
Application Aware Network	• Prioritise mission critical Apps with Load Balancing • for high reliability and resiliency

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WHY SDWAN ….3 – THE SOLUTION

Routing and Load Balancing

- The load balancing in both the inward and outward directions
- Instantaneous fails over

Application Aware

- Quality of service for best bandwidth allocation of mission critical traffic
- Application Path control

Efficiency

- FatPipe allows users to set image quality or block them so that download is faster.
- The level of quality by Loss compression is user determined.
- Can block certain file types- exe,mp4

Security

- MPSEC Tunnels
- Firewall
- Web Filtering

WAN Optimisation

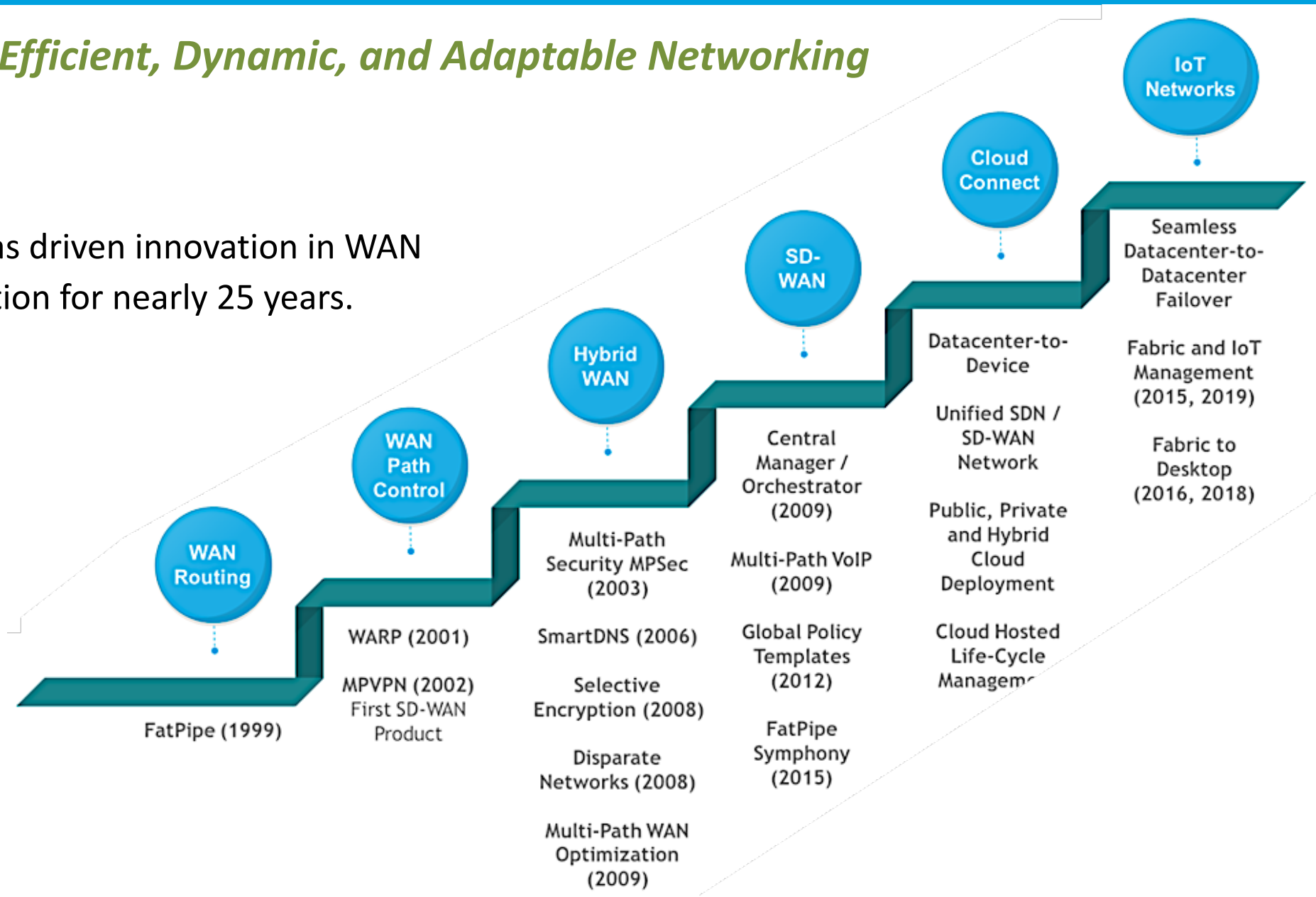
- Caching
- Compression
- De-duplication
- Byte Level Optimization
- Real Time Reports

1. **Enhanced user experience**
2. **All functionalities in one Device or VNF**

WHAT WE DO…. 1

Simple, Efficient, Dynamic, and Adaptable Networking

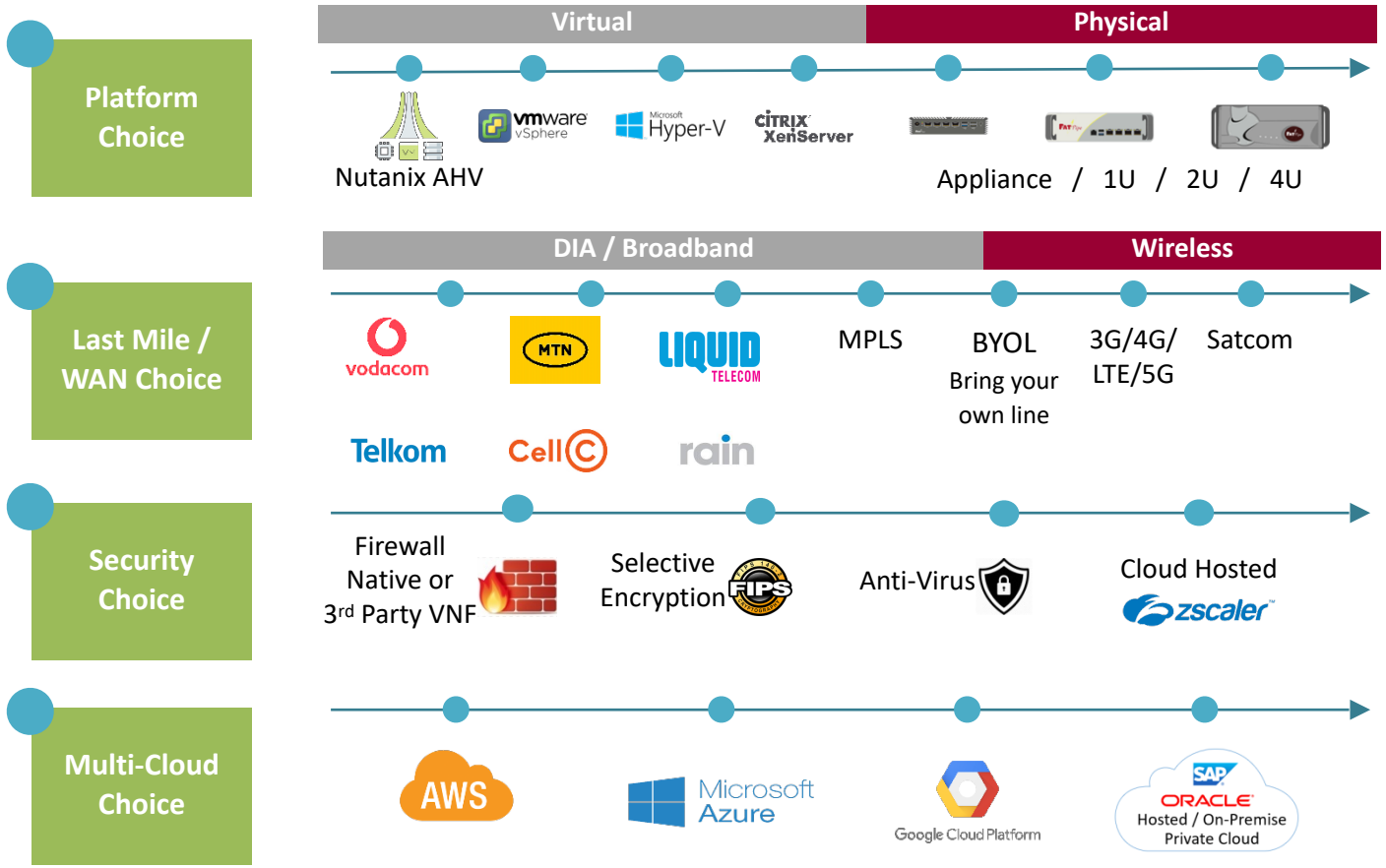
FatPipe has driven innovation in WAN simplification for nearly 25 years.



WHAT WE DO…. 2

*Providing Customers with the Power of Choice**

Leader in providing customers with the ability to deploy the optimal technologies for each use case



Leader in providing customers with the ability to deploy the optimal technologies for each use case

WHAT WE DO….. 3

FatPipe provides customers with dramatically lower TCO for their mission critical networks by providing maximum resiliency and automation

Gartner Quotes

" FatPipe is one of the leading vendors for WAN link load balancing and WAN path control capabilities for hybrid WAN and SD-WAN solutions."

" The FatPipe solution is relatively simple to operate because all functions are integrated into one platform and managed with a single high-level user interface."

" FatPipe can deliver very cost-effective WAN solutions through its ability to combine a number of low-cost WAN circuits, and it can provide high availability, path selection and basic optimization on a cost-effective platform"

"**FatPipe began offering SD-WAN solutions long before the term became part of our vernacular**"

FatPipe is Powered by Foundational Groundbreaking Patents

- Tools and techniques for directing packets over disparate networks

US Patent 6,775,235

- Combining routers to increase concurrency and redundancy in external network access. Data packets are multiplexed between the routers using a variation on the standard SYN packet synchronization protocol, and other components

US Patent 6,493,341

- Combining routers to increase concurrency and redundancy in external network access. Data packets are multiplexed between the routers using a variation on the standard address resolution protocol (ARP), and other components

US Patent 6,295,276

- System and method for transmitting a user's data packets concurrently over different telephone lines between two computer networks

US Patent 6,253,247

- Combining routers to increase concurrency and redundancy in external network access and fault tolerance of Wide Area Networks

US Patent 7,269,143

- Tools and techniques for directing packets over multiple parallel disparate networks based on address and other criteria
- VoIP over multiple WAN paths
- VoIP over multiple WAN paths

US Patent 7,406,048

- Methods, devices and systems for efficient secure parallel data transmission over disparate networks

US Patent 7,444,506

- Domain name resolution making IP address selections in response to connection status when multiple connections are present

US Patent 7,877,510

- VPN secure sessions with dynamic IP addresses

US Patent 8,356,346

- Flat Network failover control

US Patent 8,780,811

- VoIP over multiple WAN paths

US Patent 8,995,252

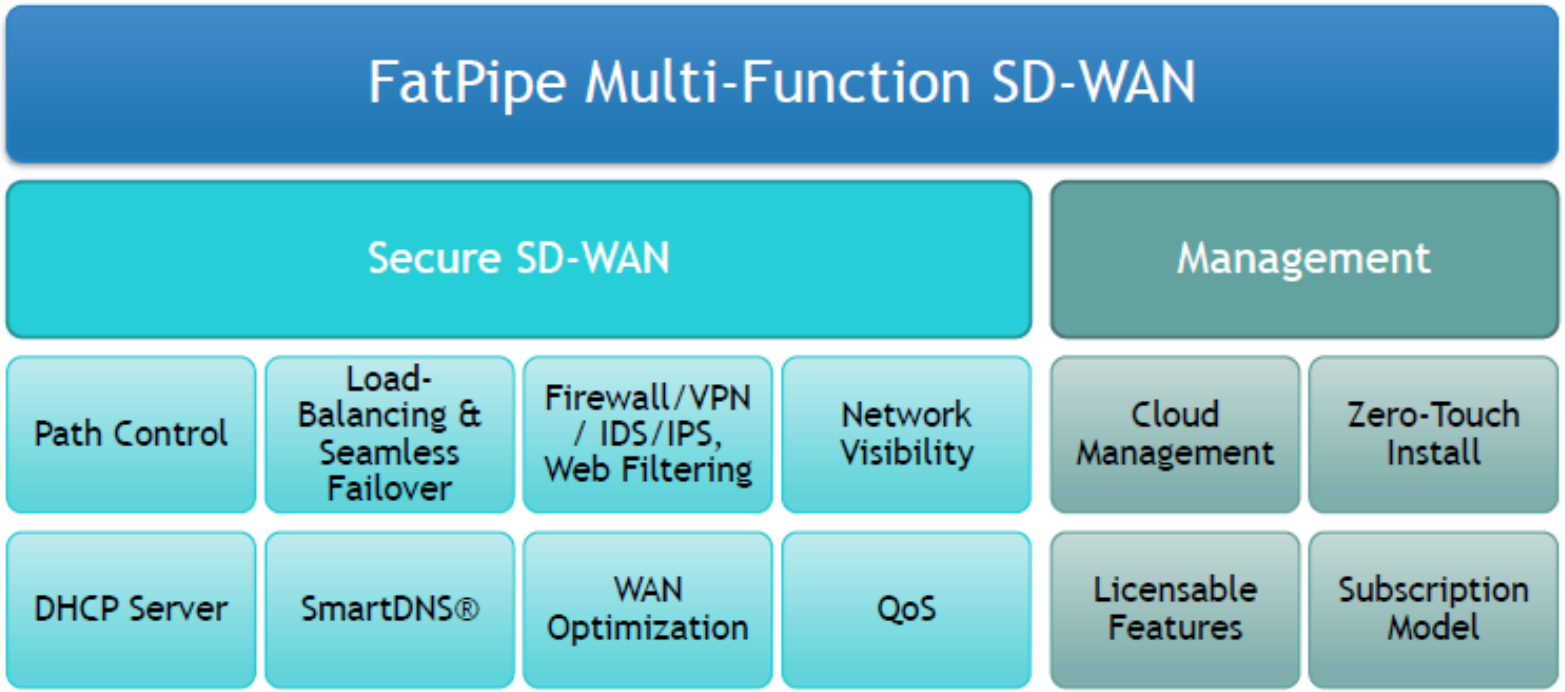
- Failover controllers help maintain user-perceived continuous connectivity for users of a geographically dispersed flat network when part of that network becomes unavailable, even though flat network packets are not WAN-routable

US Patent 10,164,822

FAT Pipe

HOW WE DO.... 2

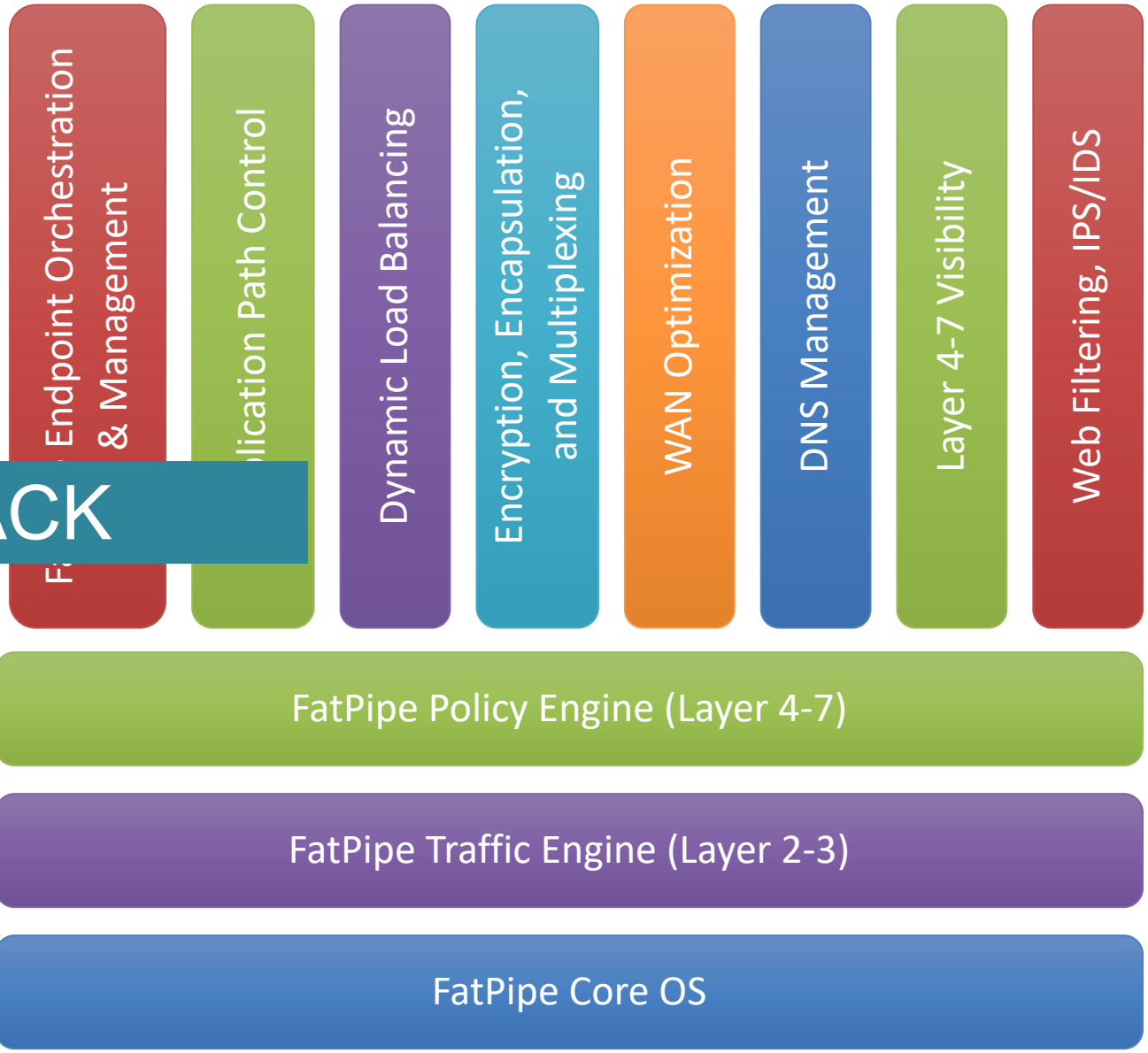
FatPipe Multi-Function SD-WAN Licensable Features, Managed Service Ready

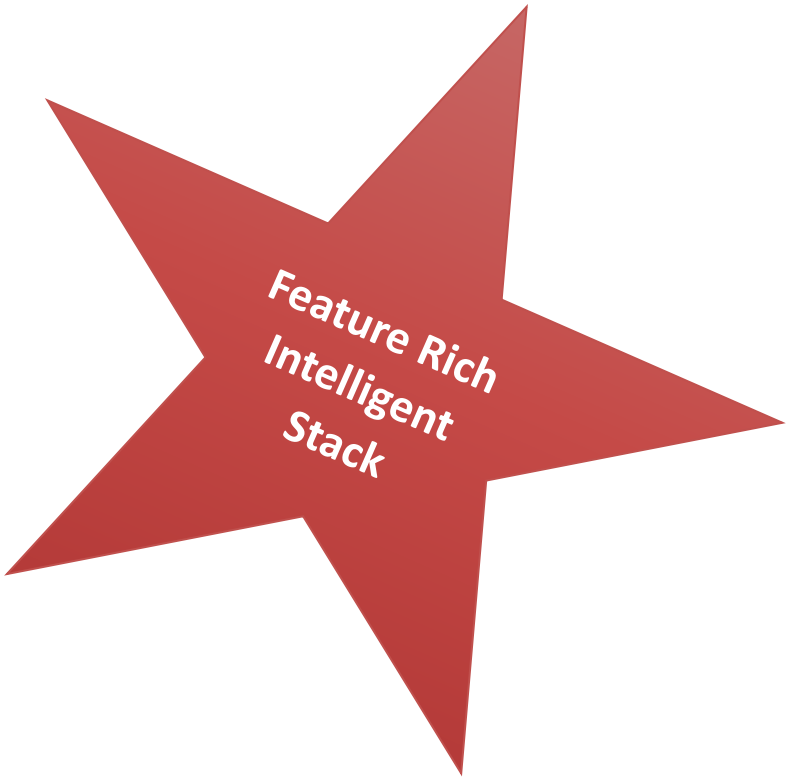


FatPipe integrates SD-WAN functionality with routing, firewall, security, DPI (Deep Packet Inspection), QoS, WAN Optimization and DNS (Domain Name System) management. This high-performance SD-WAN solution allows enterprises and organizations the ability to easily add and deploy more network functions without the complexity of multi-vendor interactions.

HOW WE DO.... 4

ON STACK





HOW WE DO IT BETTER

HOW WE DO IT BETTER 2

FatPipe Networks Unique Features based on Patents -

- FatPipe MPSec – Intelligent WAN Routing and Blockchain Type Transmission Security
- Auto Failover of VoIP Calls without dropping the call
- FatPipe SmartDNS for Inbound Load Balancing
- FatPipe Selective Encryption Data Transmission
- VoIP packets are sent on both lines without duplication.
- FatPipe Dynamic / Rotating IP Address Failover Technology
- FatPipe Hybrid Cloud Connectivity and DR Failover
- FatPipe Byte Level WAN Optimization
- FatPipe Ease of Management and granular control of traffic

Star indicate that feature is based on Patented technology

FatPipe Hardware Appliances

STD – Mini /SFF/1U/2U/4U Form Factor

- **Mini Features**
  - For sites less than 300 Mb/s
  - 4 Ethernet interfaces
  - Supports up to 2 USB
- **1U Features**
  - For sites greater than 501 Mb/s to 1 Gb/s
  - Expandable to 8 Ethernet interfaces
  - Supports up to 2 USB
  - Support for a single fiber card
  - Optional hardware choice for lower bandwidths
- **4U can support 80 Gbps & Dual PS**

Unifying Disparate Devices – Can replace Router, Firewall, Load balancer, WAN Optimisation Device, IDS/IPS, UTM and Performance/Fault Management HW/SW

Summary - Proven with Large Scale Deployments

Key Statistics

8MM+ — Over 8MM simultaneous sessions
Capable of handling 12MM+

9,000+ — Over 9,000 VPN connections – equivalent to 9,000 locations

30K+ — 30,000+ call center seat deployments for automatic and seamless failover of VoIP and data sessions

2.1MM — 2.1MM BGP routes in an industrial installation

125K — Serving over 125,000 students in school districts providing simultaneous access to the internet for coursework and testing

7MM — Handling over 7MM TCP transactions at peak load for a customers

Superior Over-the-Top Architecture

Better User Experience
No need for setting up Cloud Gateways on telco networks - Lower packet loss / Less Latency & Jitter

Greater Scalability
2 Mb/s to 40 Gb/s of bandwidth per CPE.

SDN to SD-WAN Integration
Can handle 12MM end points for Extreme's Campus Fabric

Example – 1.2MM Simultaneous Users President Obama's Inauguration

- Obama inauguration (2013) had 1.2MM simultaneous users with multiple sessions in one location
- Enabled deployment over multiple carriers without the need for setting up Cloud Gateways on telco networks

Gartner: 100% of End User Reviewers would Recommend FatPipe

FatPipe Networks has an OVERALL RATING of

4.92 out of 5

in the

WAN EDGE Infrastructure

100%

of reviewers would recommend

FatPipe Networks

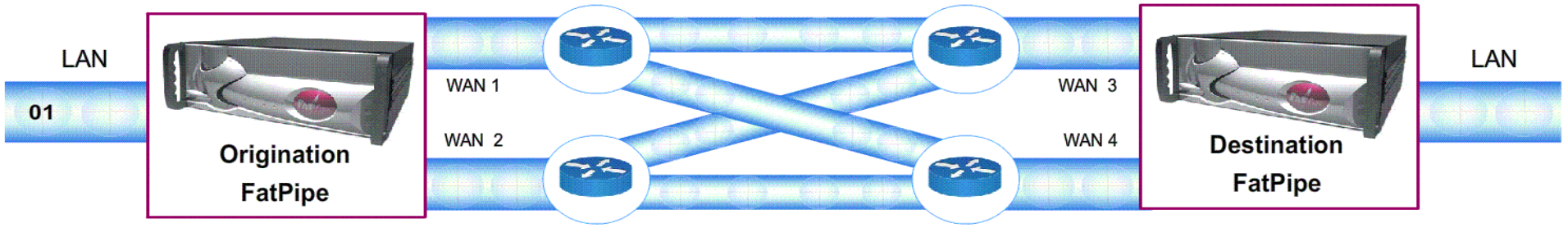
Customer Ratings for WAN EDGE Infrastructure out of 5.0

	FatPipe
Product Capabilities	5.0
Pricing Flexibility	4.9
Ease of Deployment	4.8
Service & Support	4.9

Source: https://www.gartner.com/reviews/market/wan-edge-infrastructure/compare/fatpipe-networks-vs-cisco-vs-vmware

FatPipe MPSec – Intelligent WAN Routing

FatPipe MPSec – Intelligent WAN Routing and Blockchain Type Transmission Security



FatPipe's patented Multi-path security transmission introduces a blockchain level of security for transmission between data paths. By distributing packets over multiple active links, FatPipe ensures that all data packets are not seen on any one ISP, making it impossible to put together the data stream.

MPSec technology ensures that all routes are fully utilized and bandwidth maximized. Should any one path go down, then data is automatically re-routed to the other paths, without restarting the session or dropping packets making for a REAL-TIME SD-WAN.

All the data packets are ordered and sent to the LAN at the receiving end. This eliminates the need to re-transmit out-of-order packets – a problem with other SD-WANs.

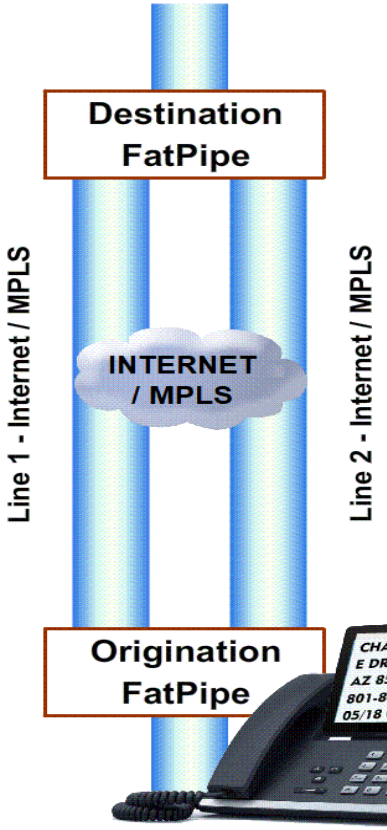
FatPipe Encryption is FIPS-140-2 certified by NIST for use by the U.S. government.

MPSec is another exciting technology patented by FatPipe.

View in presentation mode to see animation

FatPipe Automatic Failover of VoIP and Data

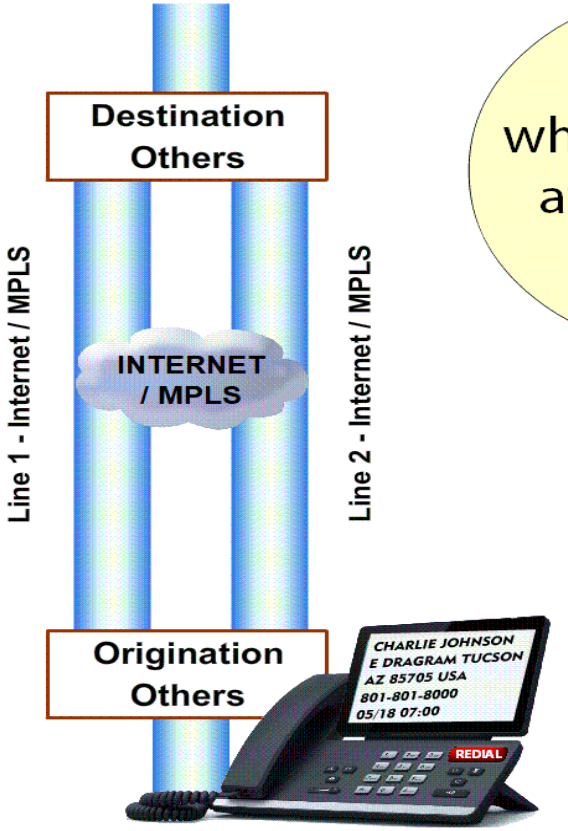
FatPipe Automatic Failover of VoIP and Data for Call Center Scenarios



FatPipe's patented technology automatically fails over all sessions including VoIP from one line to another in a sub-second, should a line fail, without dropping VoIP or data sessions. The left shows a snapshot of an animation where the first line failed. The data is automatically being transferred to the second line. With the other non-VoIP compatible SD-WANs (right), the session stops and the user has to restart the VoIP or data session.

At a call center, the customer screen goes blank at the same time the VoIP call is dropped as both are on the same data lines.

In cases where the call was from a corporate switchboard, any redials will call the main switch and not the person who actually called the call center.



Watch what happens at the 200th packet

https://www.fatpipeinc.com/slides/FatPipe-Call-Center-Scenarios/

View in presentation mode to see animation

FatPipe VS. Other Edge Products for VoIP Traffic

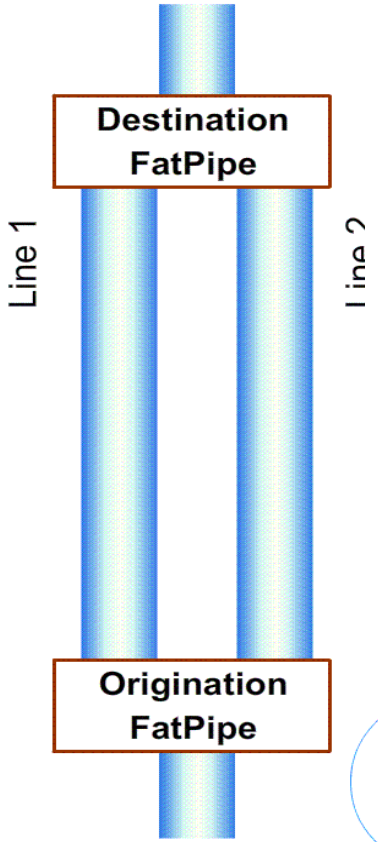
FatPipe vs. Other SD-WANs for Mission Critical Traffic

With FatPipe VoIP packets are sent on both lines without duplication.

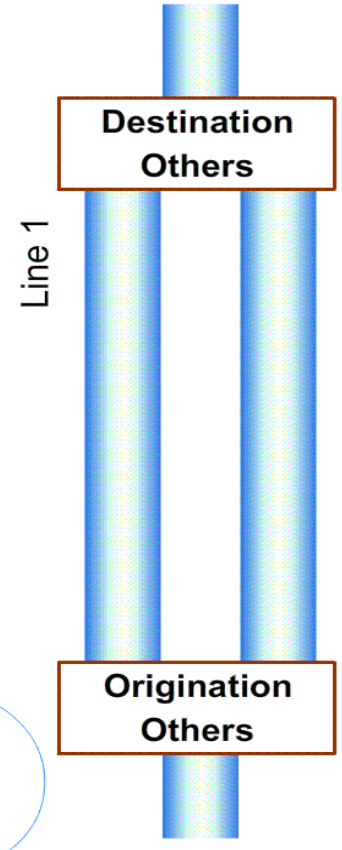
With other products, for VoIP and other critical applications, THE SAME packets are duplicated and sent on both lines and the ones that reach first are picked up and the second duplicate packet is dropped.

Bandwidth is wasted by duplicating packets.

Hosted VoIP providers can over provision with FatPipe. With others, the bandwidth capacity is reduced by half.



1 Number of Packets Transmitted 2



Line 2

Duplicate packets are dumped

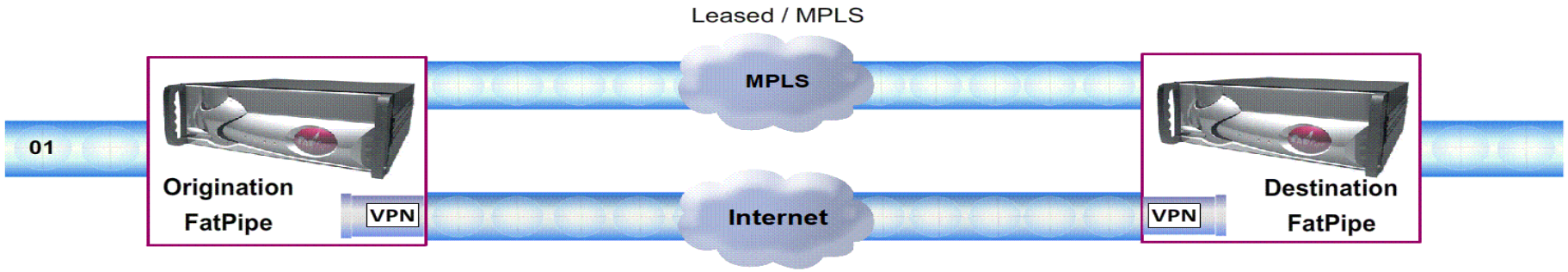
The data is transmitted at the speed of the slowest line worsening VoIP quality.

Double the packets transmitted

View in presentation mode to see animation

FatPipe Selective Encryption Data Transmission

FatPipe Encryption Data Transmission

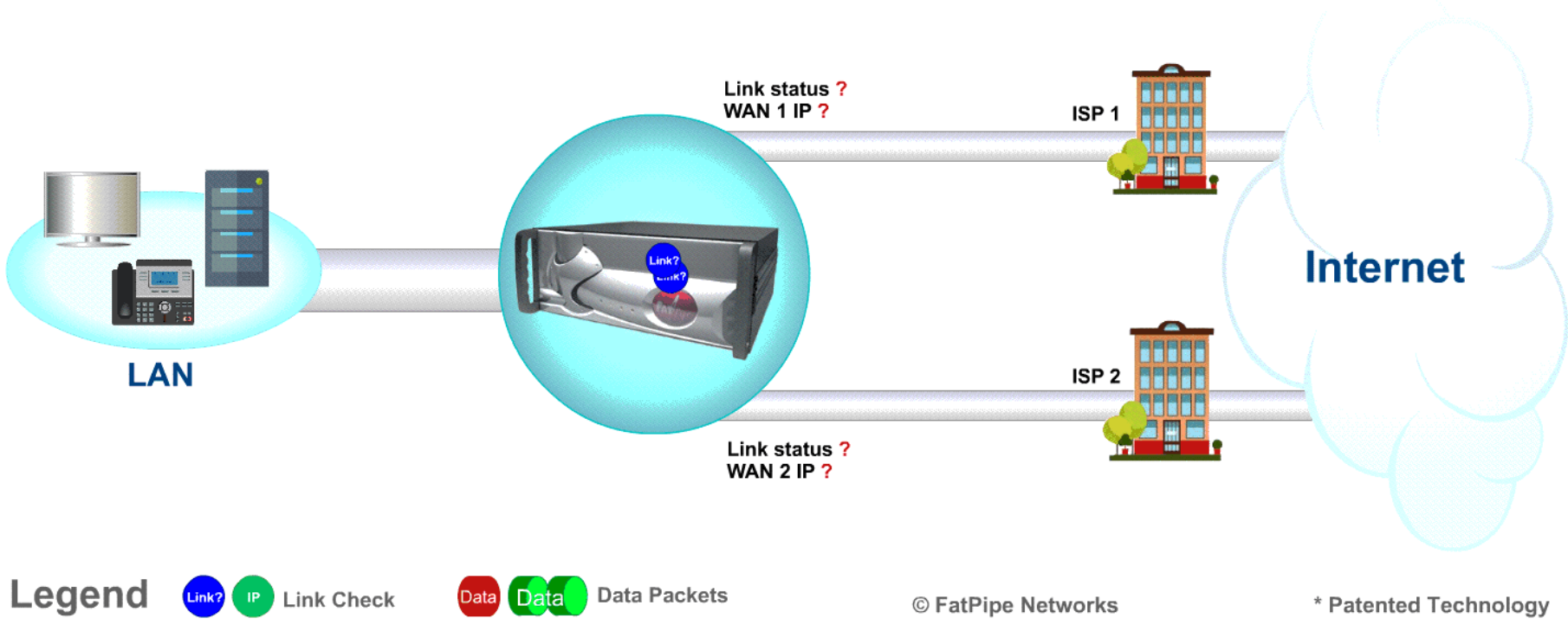


FatPipe's patented Selective encryption technology selectively encrypts only the internet traffic. This saves about 40% bandwidth on the MPLS line. Therefore, 40% extra capacity is available for data transmission on MPLS lines.

No separate VPN encryption device is needed. FatPipe's U.S. National Institute of Standards and Technology certified FIPS 140-2 encryption technology reduces the need for another VPN device. FatPipe can concentrate more than 7000 VPN tunnels.

View in presentation mode to see animation

FatPipe Dynamic/Rotating IP Address Failover Technology



Benefits

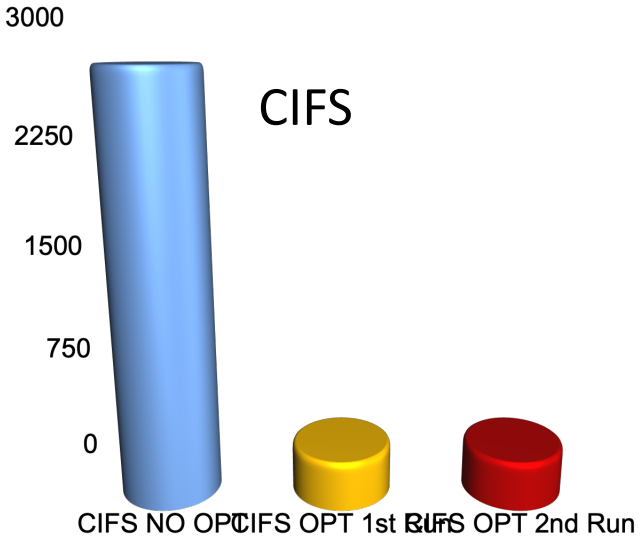
- Fatpipe's Rotating IP technology senses the change of IP address and automatically re-configures the SD-WAN networks and re-connects without dropping packets or dropping a call.
- ISPs can offer lower cost, rotating IP address second connections alongside their MPLS
- Works with rotating wireless connections for back-up.

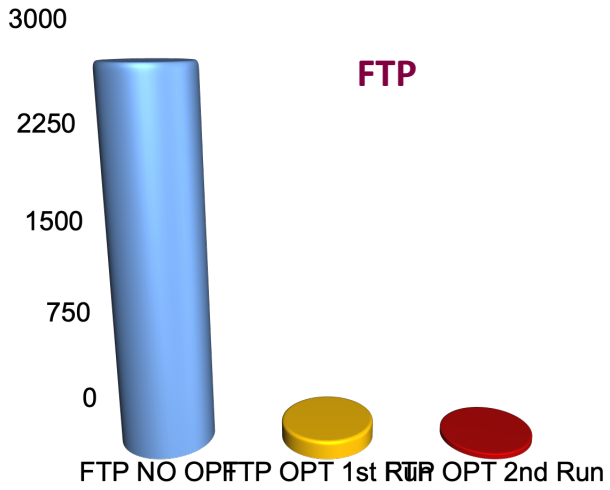
FatPipe WAN Optimization

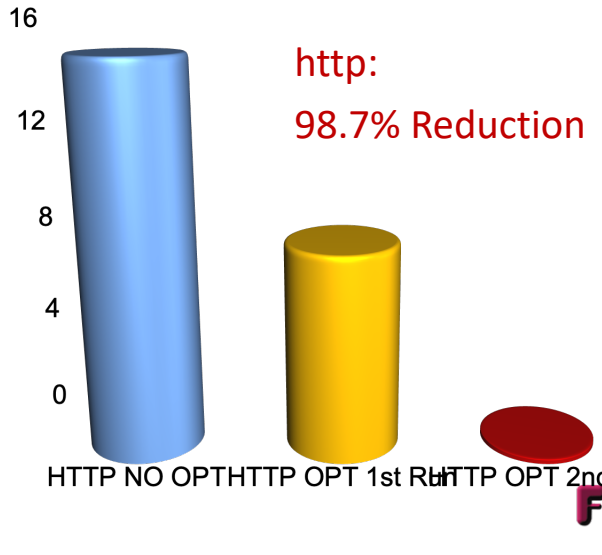
FatPipe WAN Optimization Benefits

- Reduction between 40% and 90%
- Filter traffic such as advertisements, music, attachments etc.
- Works with any carrier, and any link type; i.e. Ethernet, DS3, Leased lines, DSL, Satellite, Cable, Wireless (3G/4G/ 5G and USB cards)
- Compresses data to 2% of original size
- De-duplication provides up to 60 times average data reduction
- Set priorities and guarantee bandwidth based on application (Layer 7), IP or port (Layer 3).
- Use existing VPN or FatPipe's MPVPN
- TCP and UDP optimization

Real time Chart of compressed and uncompressed traffic



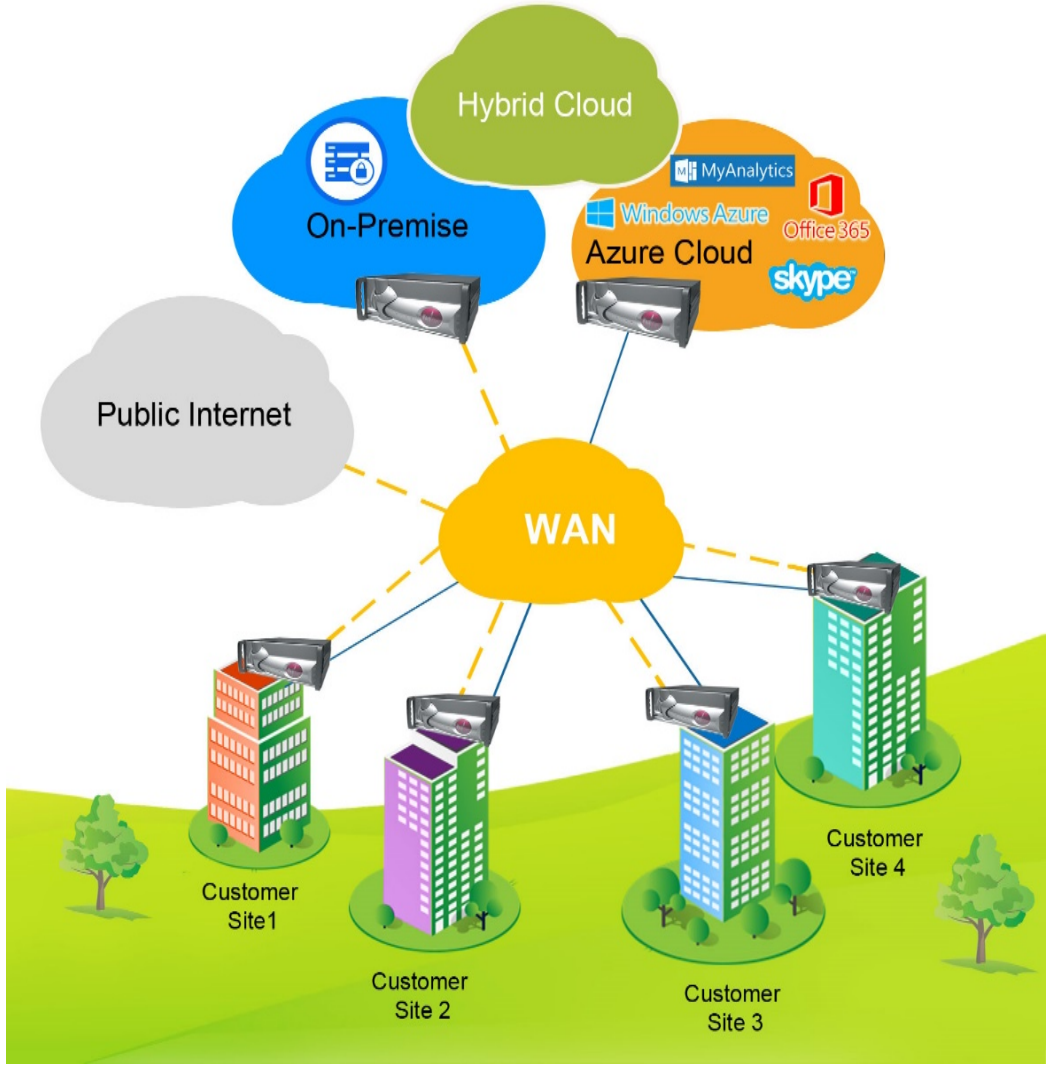




FatPipe and Hybrid Cloud Connectivity and DR Failover

FatPipe Cloud Connectivity Features

- FatPipe solutions work with any cloud based solution, including AWS, Azure, Google, IBM, and others.
- Can run as a VM on all major hypervisors
- Multi-line, multi-provider connectivity options enable customers to use any type of links to hosted applications.
- Built in WAN optimization features significantly reduces bandwidth needs
- FatPipe's QoS enables administrators to assign priority to real time applications.
- Dramatically improve performance of hosted applications no matter where located.

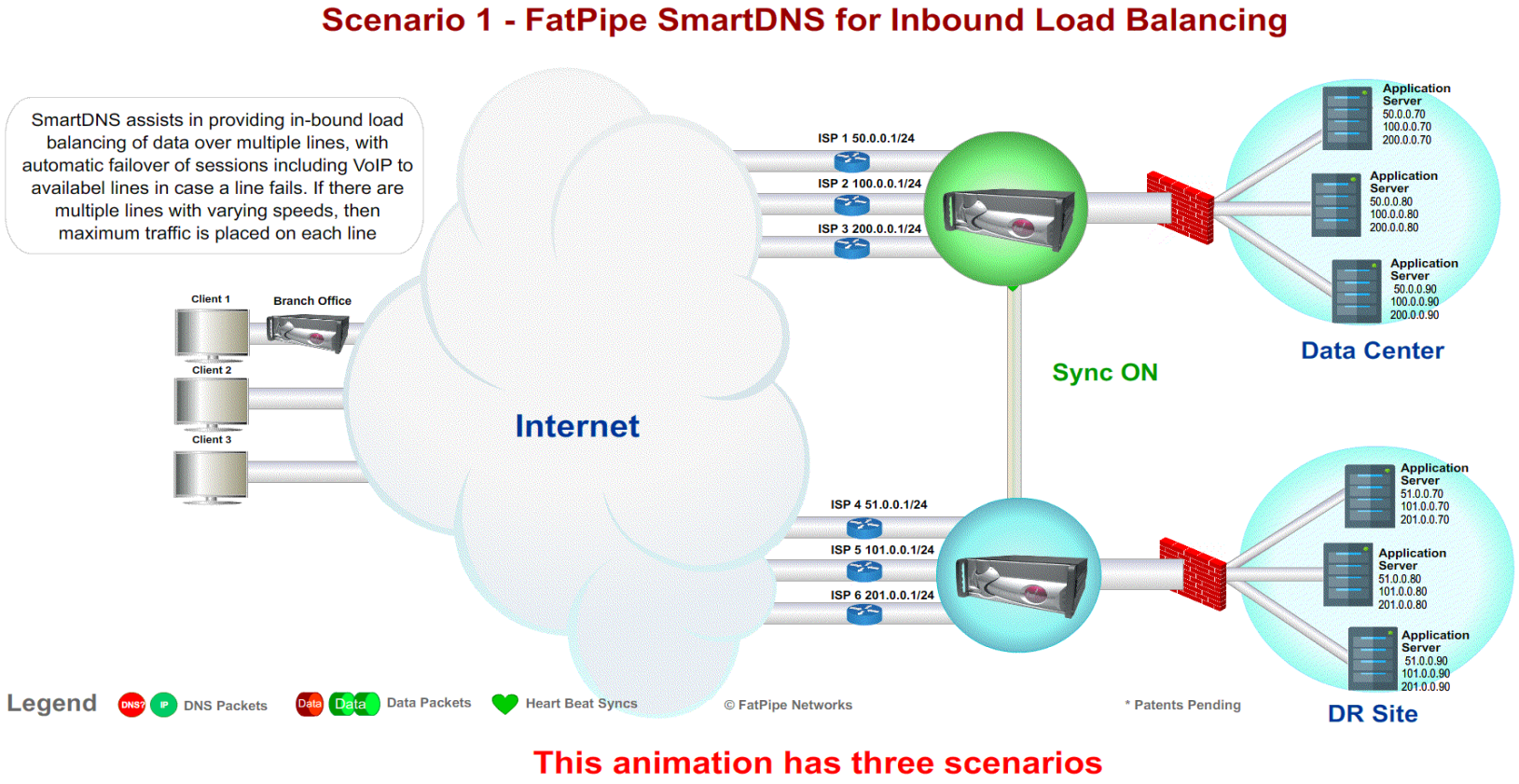


FatPipe Cloud Connectivity Benefits

- Performance – FatPipe supports WAN Acceleration over multiple data lines for even faster speeds
- Improved reliability, no downtime due to session loss
- Application/Data Independence – Faster WAN caching – FatPipe provides the benefit of storage at the byte level, and supports all major protocols.
- QoS – FatPipe's QoS provides granular control of data flow on both the application and networking layers.
- FatPipe's patented MPVPN provides highly secure data transmissions over any line type to both cloud and non cloud hosted applications.

FatPipe Integrated Hybrid Cloud Management for DR/BC Seamless Failover

- **FatPipe Site Load Balancing** distributes incoming IP traffic between several autonomous sites. FatPipe utilizes the bandwidth and server resources at various sites.
- Fatpipe has the most sophisticated Hybrid Cloud management and Fail over solution to ensure Business Continuity and Disaster recovery.
- Fatpipe can automatically sense automatically the following situations
    1. Failure of a data center and automatic failover to a back-up data center
    2. Failure of server at the datacenter and failover to a back up server
    3. Failure of Application in a server and failover to an application at a back-up server



https://www.fatpipeinc.com/smartdns/demo/sts-all.html

FatPipe Firewall

Stateful Firewall

- Highly restrictive and secure stateful firewalls for branch offices.
- By default all inbound sessions originating externally are blocked. Branch appliances only allow those inbound sessions through that are defined by specific inbound policy rules.
- Outbound sessions can be restricted by policies , which provides the ability to allow/deny traffic at a very granular level based on the Layer3/Layer4 and Layer 7
- Restrictive rules can be applied based on a schedule and switched on/off based on a schedule.
- By default, all traffic destined to any of the IP address FatPipe WAN IPs are blocked. The only accessible ports are TCP Port 80 & TCP Port 5001 (Remote Management), TCP Port 22 (SSH), UDP Port 500 (VPN), UDP Port 53 (DNS), UDP Port 161 (SNMP). Access to all these ports can be denied any WAN interface by unchecking the respective checkboxes in the WAN Interface Page. FatPipe also has the option to allow/deny ping (ICMP).
- The FatPipe appliances become ‘invisible’ to the outside world once all these ports are unchecked.
- FatPipe appliances also have built-in DDoS protection to mitigate external attacks.

FatPipe IPS / IDP and Web Filtering

IPS / IDP

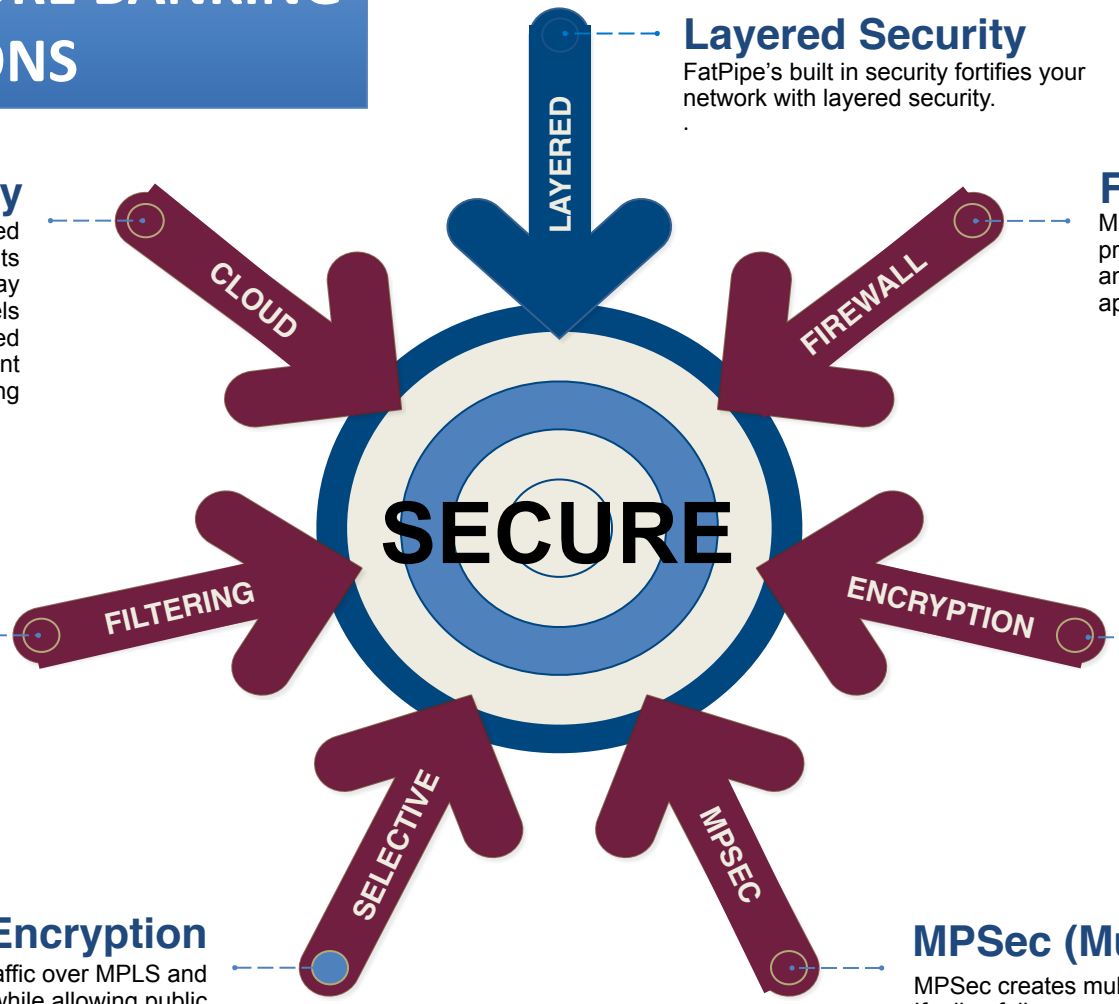
FatPipe IPS / IDS monitors network traffic and alerts System Administrators when potential hostile traffic is detected. The system gathers and analyzes information from various areas within a computer or a network to identify possible security breaches, which include both intrusions (attacks from outside the organization) and misuse (attacks from within the organization). IPS / IDS can respond to malicious traffic by taking action such as blocking the user or source IP address from accessing the network. FatPipe IPS / IDS functions include monitoring both user and system activities, analyzing system configurations, and scheduling events.

Web Filtering

- Content can be blocked by site, using lists of URLs cataloged by content that are frequently updated.
- Web Filter allows an enterprise or individual user to block pages from websites that are likely to include objectionable advertising, spyware, viruses, and other objectionable content.
- Web Filter's features include policies, categories, users and groups, and Web Filter Statistics.
- Additionally, FatPipe allows IT Managers to block advertisements on web pages. It also provides options for blocking specific file types, including exe, mp3, mp4, swf, wmv.

FatPipe Built-in Security Features MPVPN

TO ENSURE MOST SECURE BANKING TRANSACTIONS



Layered Security
FatPipe's built in security fortifies your network with layered security.
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Cloud Hosted Security
FatPipe enhances cloud-based firewall and SWG deployments
Traffic is tunneled to cloud gateway using GRE or IPSec tunnels
Trusted locations can be propagated to branches for more efficient routing

Firewall
Manage traffic at L3/L4 and L7 Policies based on protocol, DSCP, source & destination IP/Mask and destination port Traffic identified based on application Built-in DDoS protection

Web Filtering
FatPipe Web Filter can monitor and screen SSL/HTTPS web pages
Web Filter enforces Internet usage policy by blocking access to websites and Internet application
Content can be blocked by site using URLs and specific file types

Encryption
Supports AES, 3DES, SHA1, MD5
Standard encryption with IPSec and GRE encapsulation can establish VPN/ GRE tunnels with 3rd party security appliances undergoing FIPS 140-2 certification

Selective Encryption
Hybrid WANs - steers sensitive traffic over MPLS and encrypted tunnels to HQ/DC, while allowing public internet traffic locally directed to the Internet
Keeps local Internet traffic isolated from private MPLS traffic and from customer Internet offload traffic

MPSec (Multi-Path Security)
MPSec creates multiple data pathways between locations
If a line fails, communications will continue uninterrupted
Able to establish secure tunnels between static and dynamic IP address even when dynamic IP address change

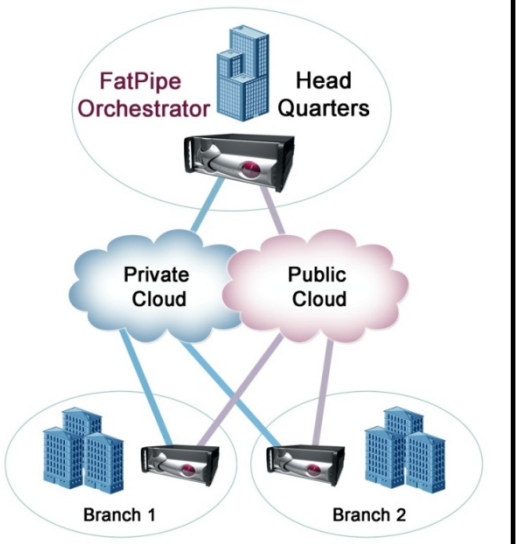
FAT Pipe

Ease of Use: Symphony with Orchestrator

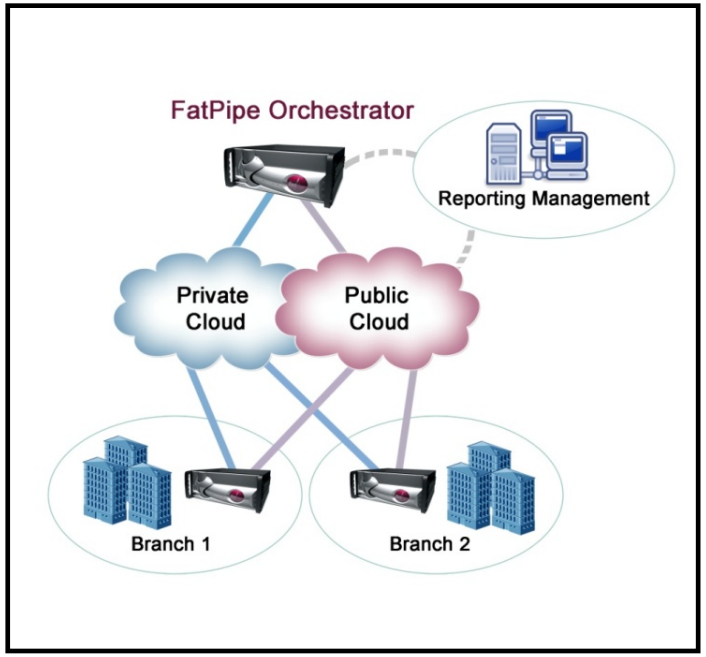
FatPipe orchestrated low-touch / zero-touch branch enables enterprises to centrally control their WANs, easily manage branches, and deploy appliances with no IT staff needed at a remote branch. End users can easily migrate to a more optimal hybrid WAN topology for diverse cloud resources.

Three Deployment Options

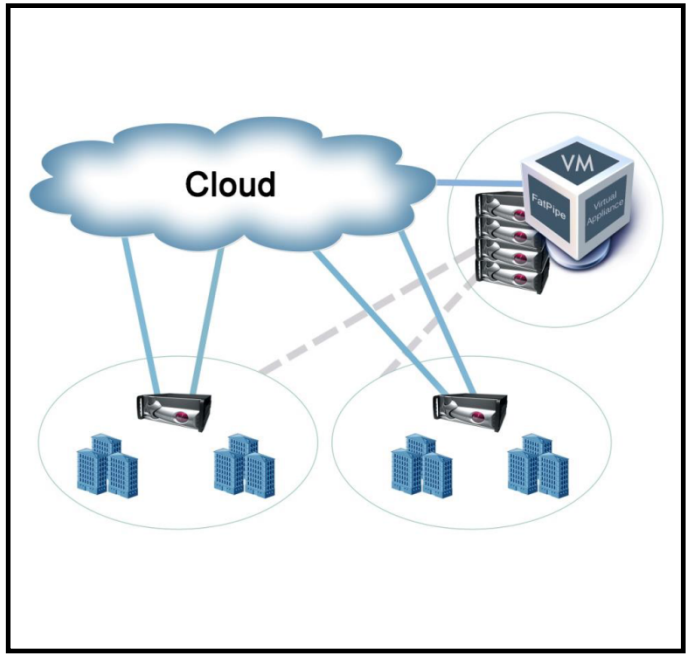
On-Premise



Customer Hosted



As a Service



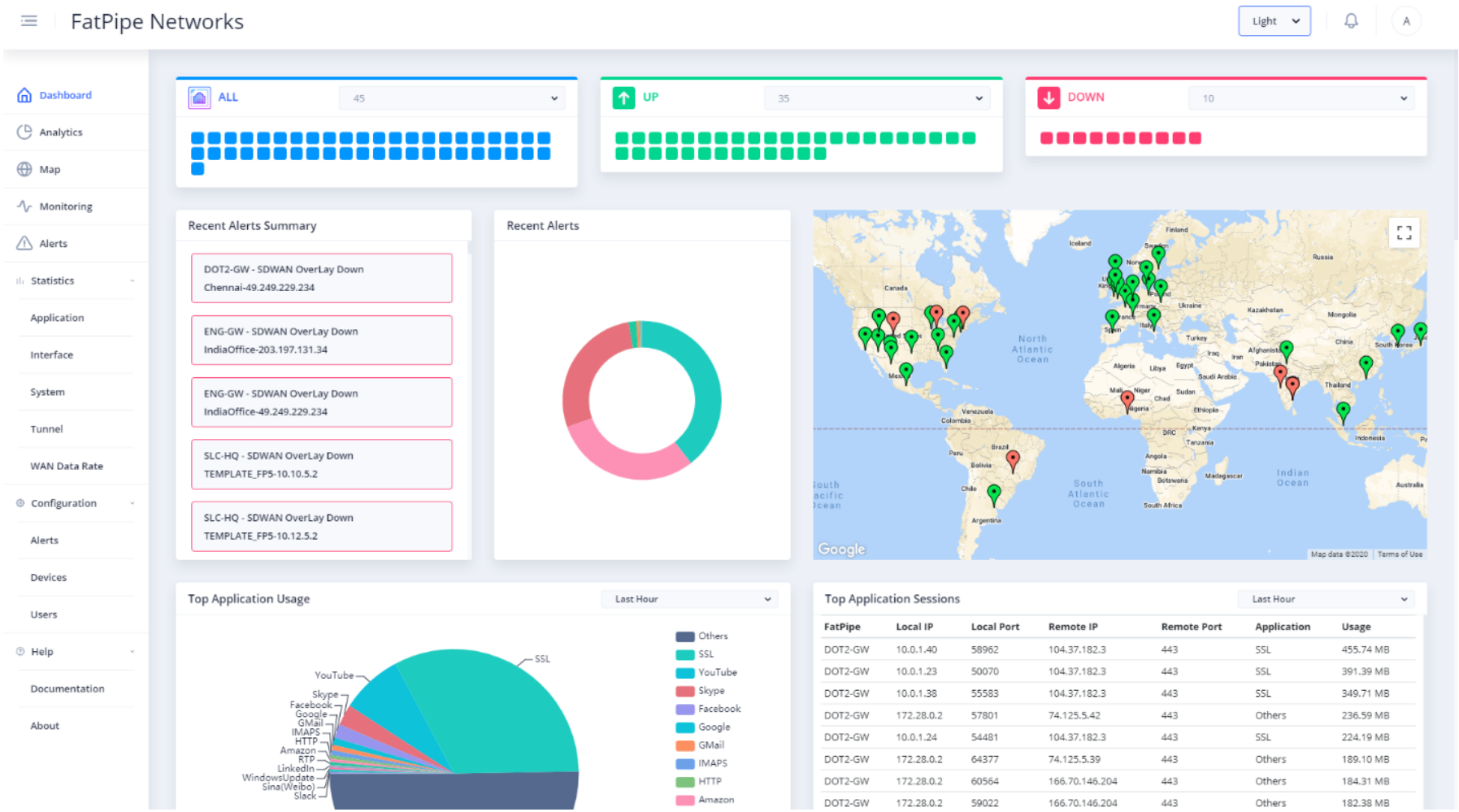
Features

- Separate Data & Control Plane
- Zero-touch automatic configuration at branches
- Respond to WAN changes faster
- Decreased time to deploy new sites, services, or bandwidth
- Monitoring and Alerts with Enterprise View
- Dashboards
- Comprehensive Reports

High Availability and Multi tenancy possible in all three options

FatPipe EnterpriseView ™– Dashboard

EnterpriseView™ provides Dashboard and Alarm Monitoring Capability with different Severity Alerts



Dashboard

36
UP

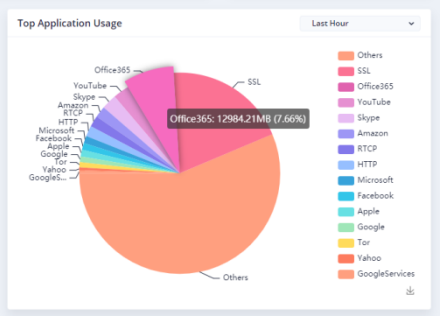
9
DOWN

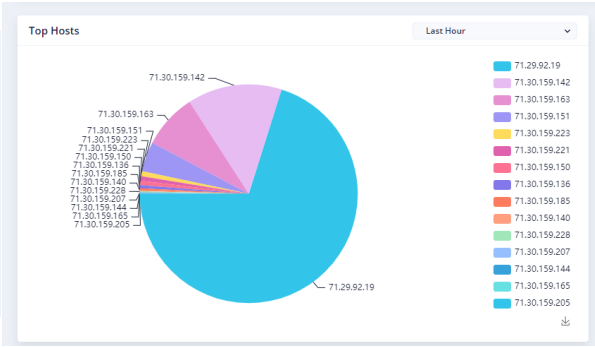
EnterPriseView™ Capabilities

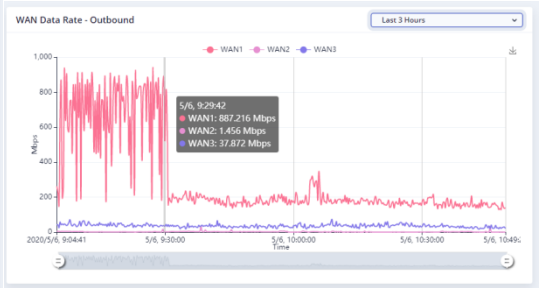
- Monitoring
- Analytics
- Statistics
- Alerts and Notifications
- Reports

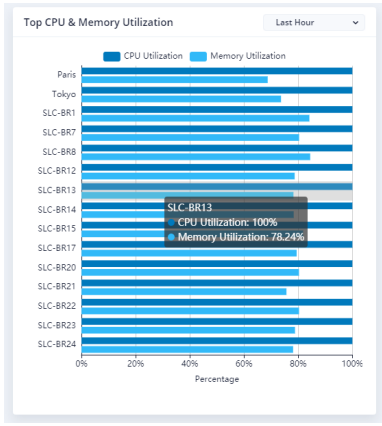
FatPipe EnterpriseView ™– Reports

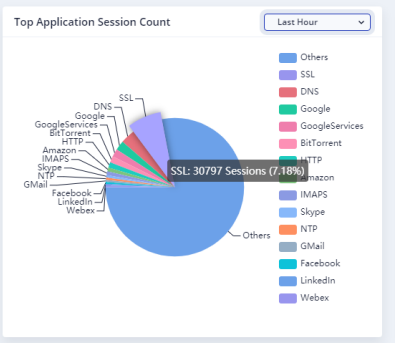
Various Parameters Reported By FatPipe EnterpriseView™

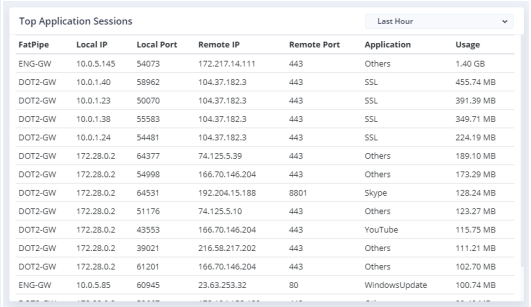


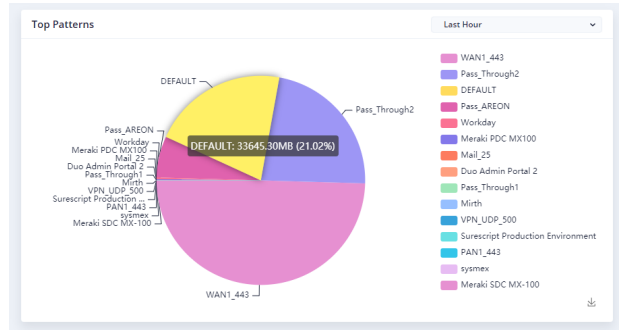


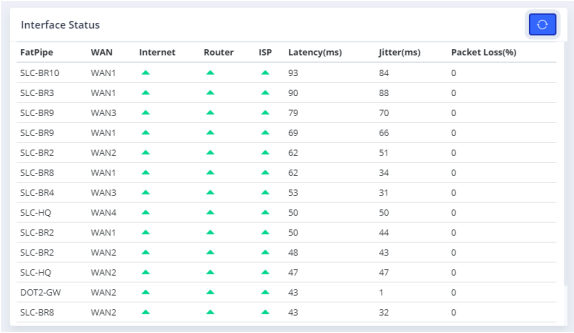


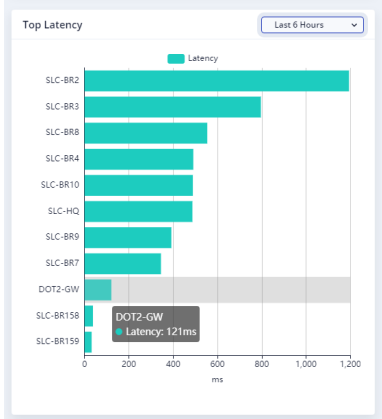












EnterpriseView™ Reports

- System statistics
- ISP Status and Uptime
- Diagnostics
- Quality of Service (QoS)
- Alerts – emails and texts
- Reports daily

- Inbound/Outbound Speed monitoring
- Packet Loss, Jitter, Latency control for VoIP
- Protocol Monitoring (TCP, UDP, etc.)

- MPSec Status
- Top Applications
- Top Hosts
- Top Patterns
- Top n Talkers
- Top Protocols

CUSTOMERS & CASE STUDIES

FatPipe SDWAN with Zero touch deployment for a Bank

Who

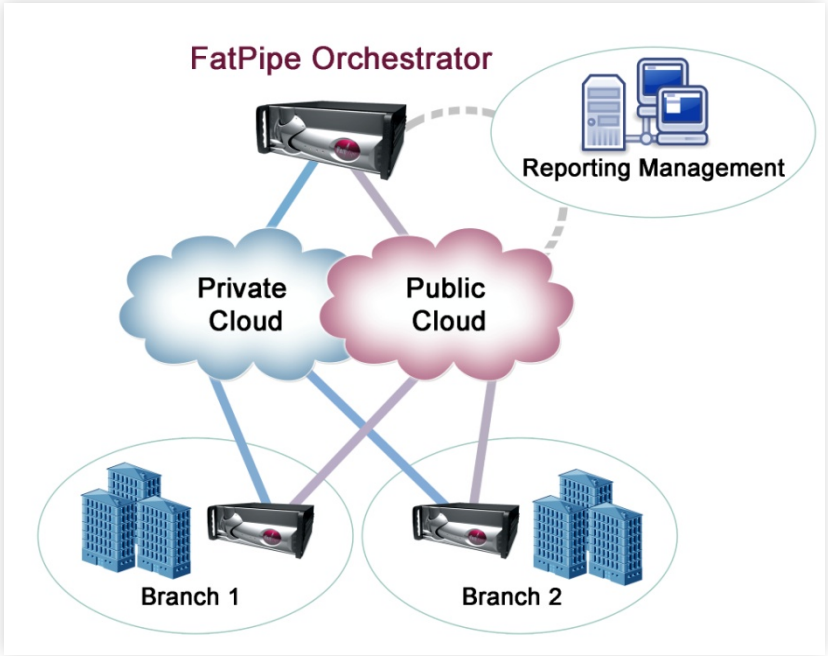
The customer is a leading diversified financial institution that provides a full range of financial products and services to both institutional and individual customers. The bank has 5000 employees with 50 branches, ATM network of more than 40,000 locations.

Challenge

The bank wanted to keep its communication Infrastructure costs down by utilizing multiple high speed data lines at each branch location. Lead time required for installation on new MPLS circuits was creating delays in business plan.

Solution

- FatPipe combines multiple data connections at the data center, HQ and all the branches.
- FatPipe provides encryption and failover.
- Policies propagate automatically to branch locations



Benefits

- Low touch / No touch installation
- Ease of management
- Better than industry standard encryption and security
- WAN aggregation for best locally available bandwidth
- No BGP
- No geographic constraints

FatPipe MPVPN Case Study for Call and Service Centers

Who

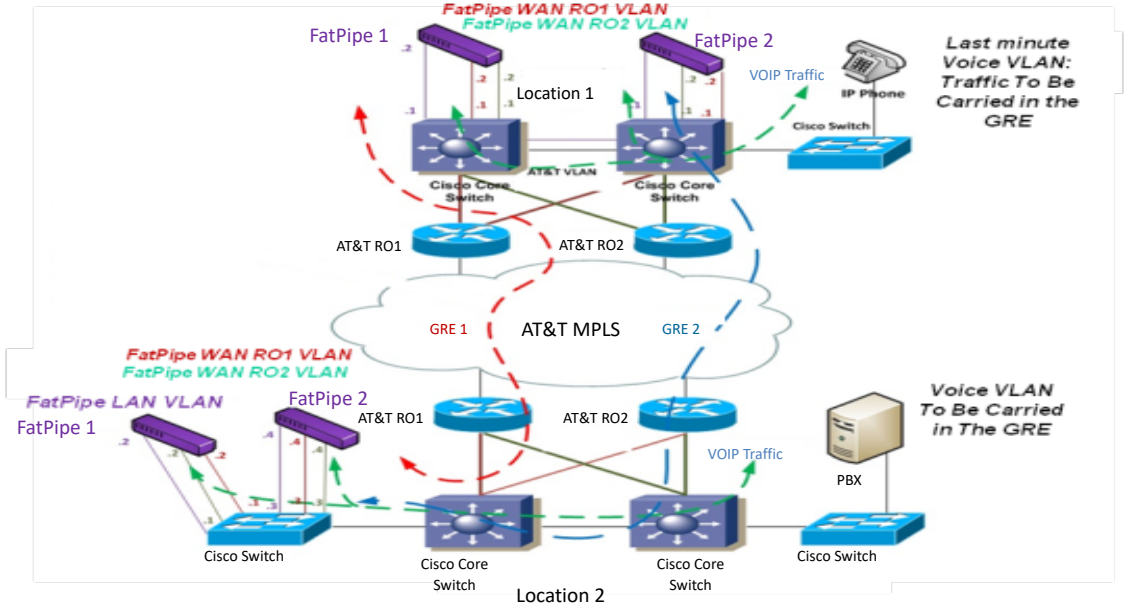
Customer is a leading global business process outsourcing provider of customer care and complementary back-office processes. Has over 100 locations and 30,000+ seats

Challenge

Experienced multiple disruptions that resulted in downtime. Calls were disrupted and degraded; Customer lost contact with its end users as well as the agent. The system automatically “rebooted” in order to free the line as well as restore the agent from their core switch.

Solution

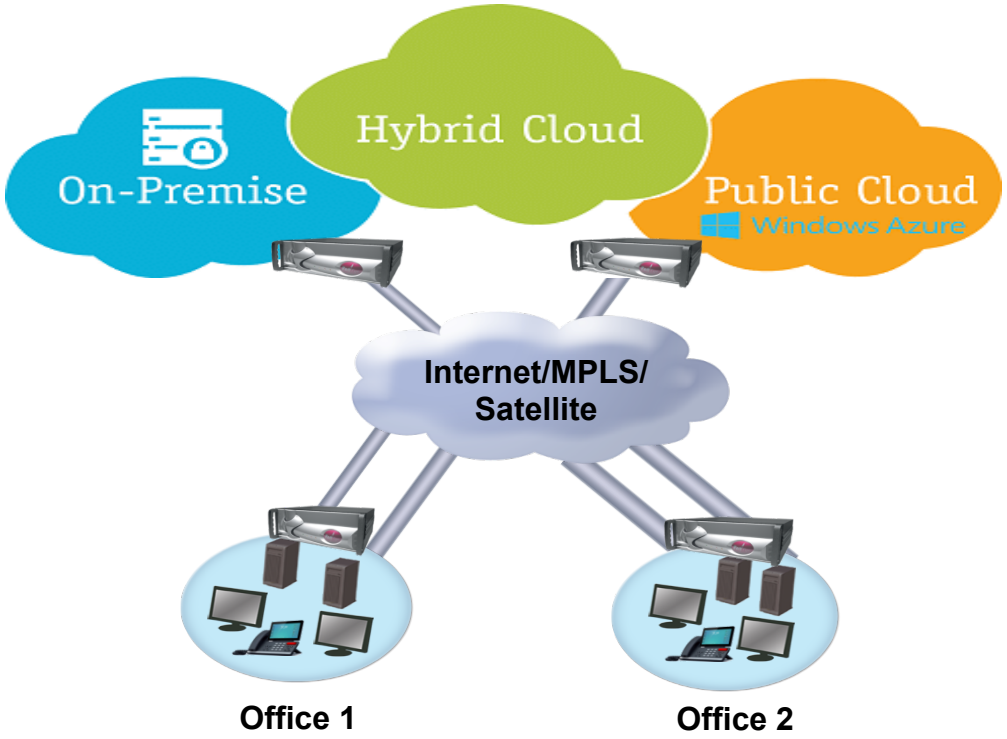
- FatPipe combines multiple MPLS connections into one high-speed Ethernet connection at multiple sites around the world
- Provides automatic fault tolerance, notification and restoration of VoIP and data services
- Assures that the VoIP call remains “on-line” if and when the primary facility fails



Benefits

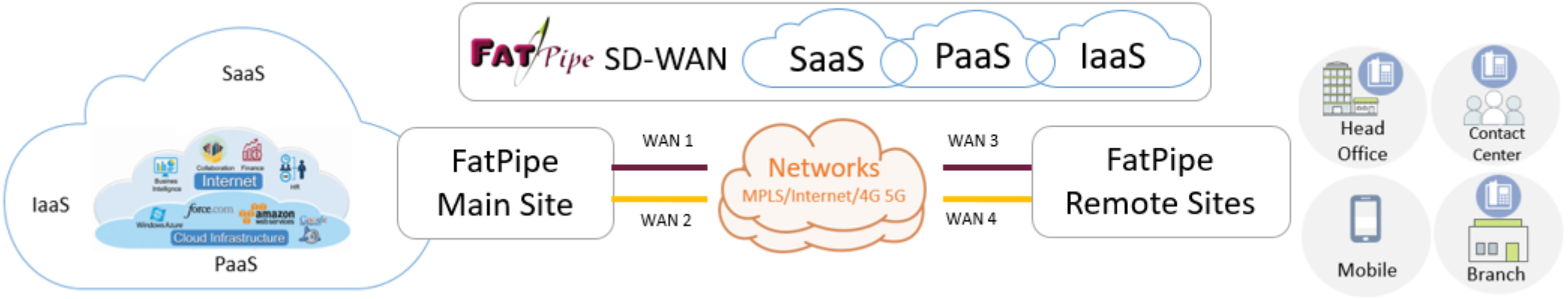
- The end user is never disconnected from the call
- The call agent is never stranded on a dead line
- The “system” does not have to reboot to clear the network and agent connections

Case Study - Secure Cloud Connectivity – Azure and AWS



- **Need:** Provide high bandwidth enterprise-wide connectivity. Reliable, high speed internet connectivity. Reliable "highly-availability" connection for mission critical servers, including: web, database, thin client / RDP, and email. Migrate some services to Azure with disaster recovery replication.
- **Solution:** Use multiple FatPipe units to provide redundancy, high availability, and "always up" connections to business-critical communication with private and public cloud.

Case Study - Secure Connectivity and Cloud Access – Healthcare



- **Need:** Customer Needs highly reliable network access for cloud applications, as well as access to federal and insurance sites.
- **Solution:** Use multiple FatPipe units to provide redundancy, high availability, and “always up” connections to business-critical communication with private and public cloud.

WARP case study: Global Rapid Deployment

Who

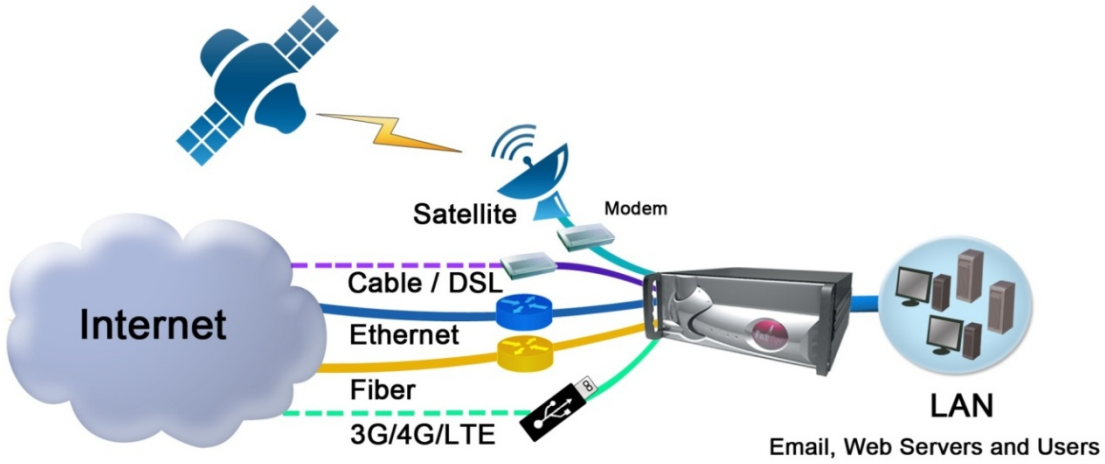
The customer is a emergency services and aid provider . They have a global footprint and they respond to global natural and man made disasters.

Challenge

They have to bring up mobile locations in affected areas rapidly.

Solution

- FatPipe combined all types of data lines into one high-speed connection including MPLS, DSL, Cable, Satellite or 3G/4G/5G LTE
- Provided automatic failover and restoration of data services
- Assured VPN connectivity for connectivity to data center



Benefits

- Rapid Deployment
- Ease of Management
- WAN Aggregation of multiple lines
- VPN Failover to Maintain Application Continuity
- No BGP programming
- No ISP involvement

VoIP Case Study: Fatpipe for High Quality Hosted VoIP and Video

Who

Companies and Call/Service centers that are using Hosted VoIP or Conferencing Services

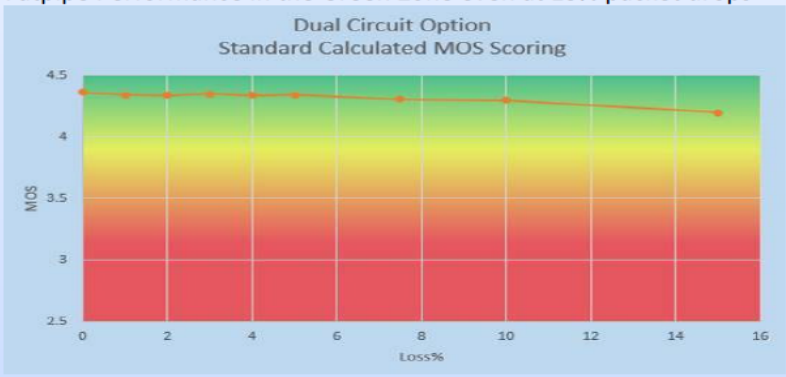
Challenge

Hosted VoIP quality can vary significantly. Calls are dropped when a line fails over to another line.

Solution

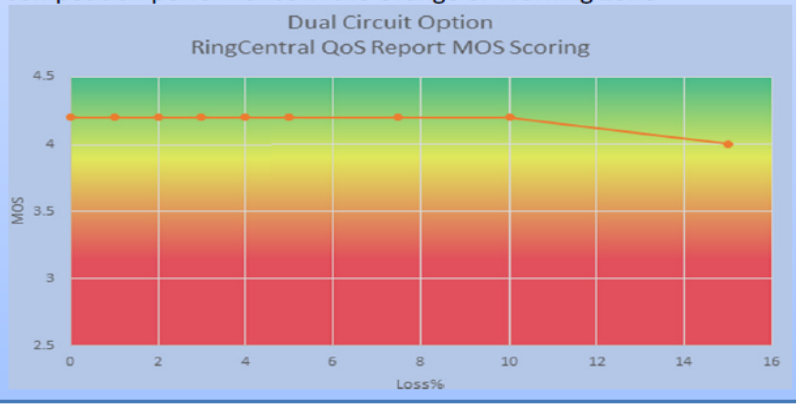
- Fatpipe proprietary technology and jitter and latency management ensures high quality calls
- Fatpipe obtained the highest MOS score rating in Ringcentral's tests, The VoIP quality was high remaining in the Green Zone even when the packets drops were as high as 15%. Other products were in the orange zone where the call quality degrades.

Fatpipe Performance in the Green Zone even at 15% packet drops

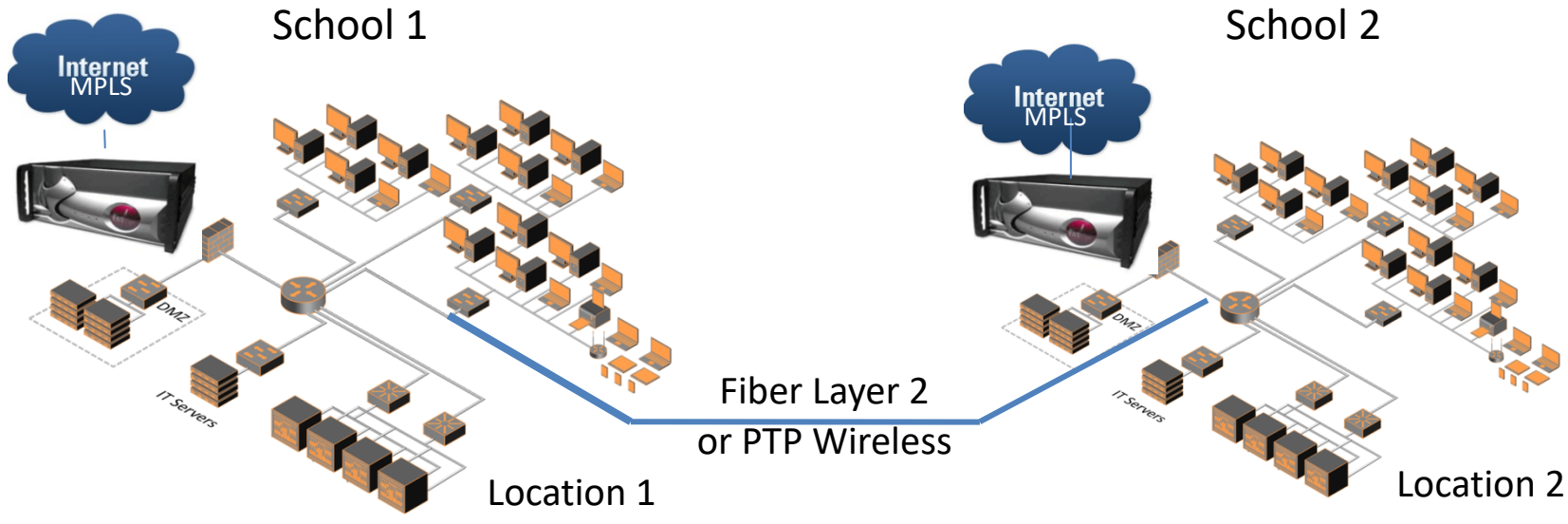


"Your correction of up to 15% packet loss on both circuits simultaneously while maintaining toll quality calls and seamless failover on a circuit failure is the big selling point."
Tim McKee Ringcentral Senior Network Architect 6/2019

Competition performance in the Orange or Warning Zone



Layer 2, Flat Networks Load Balancing for Campus Network Redundancy



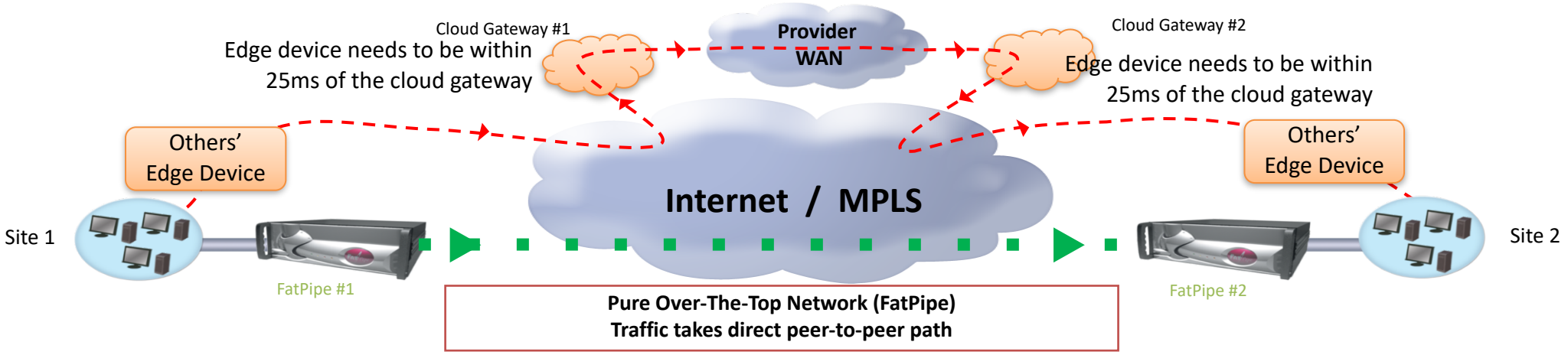
Network Description:
Environment with Layer 2 connections between sites where an Internet connection exists at each main Bldg. Each location as its WAN. The two lcoations are connected by Fiber or other Layer 2 medium. Current use is one ISP at each location and no dynamic load balancing.

Objective:
Utilize both Internet connections for load balancing and upon failure of one line the other is usable. Both scenarios occur regardless of which building session originates from.

Resolution:
If one location's WAN fails, the Fatpipe at second location will automatically start carrying the WAN traffic for the other location. Provides WAN redundancy

FatPipe Over the Top Technology Ensures the Lowest Latency

FatPipe Over-The-Top MPVPN Vs. Cloud Gateway Based Products



Profitable Pure Over-the-Top Delivery (FatPipe)

- FatPipe at Site 1 directly connects with FatPipe at Site 2, reducing latency of VoIP and data flow from Site 1 to Site 2
- Traffic takes the fastest route from Site 1 to Site 2, with no traversing on hosting company network
- No need to install cloud gateways in provider WAN cloud.
- Provider can offer FatPipe based solution immediately without modification to cloud infrastructure.
- Works with multiple MPLS
- No extra bandwidth overhead on infrastructure.
- Can turn on FatPipe's WAN Acceleration to reduce bandwidth on infrastructure.

Cloud Gateway Solutions (Others)

- Edge Device #1 connects to Cloud Gateway #1 via the Internet
- Cloud Gateway #1 passes traffic either back out the Internet or across the provider's network to Cloud Gateway #2
- Cloud Gateway #2 connects to Device #2
- Increases network costs for hosting company as it has to route all traffic through it's network. Increases traffic on network bogging down the network.
- Extra latency induced due to gateway hopping affects VoIP & video quality.
- Extra wasted bandwidth on carrier's network and customer's network
- Duplication of data packets means more bandwidth needs
- ***Can connect only ONE MPLS network.***

FatPipe Customers by Verticals

Healthcare

- CalOptima
- MAGNACARE
- Arkansas Children's Hospital
- Kansas City
- MAJOR HOSPITAL MHP

Government

- Federal Bureau of Investigation
- City and County of Honolulu, State of Hawaii
- Sullivan County, N.Y.
- City of Asheboro, North Carolina

Education

- Cayuga Community College
- Anne Arundel Community College
- Laredo College, Laredo, Texas
- Paterson Public Schools

Hospitality

- Stratosphere
- Morongo Casino + Resort + Spa
- Baltimore Ravens
- Dallas Cowboys
- Colorado Rockies

Manufacturing

- Aptargroup
- HUSCO International
- Atlantic LNG
- Titleist
- Zodiac Aerospace
- Takeuchi
- Wheels India Limited

Transportation and Logistics

- C.R. England
- National Van Lines, Inc.
- Nassau Lynden Pindling International Airport LPIA
- Indianapolis Airport Authority

Retail

- Brooks Brothers
- Allen Edmonds
- prince retail
- Raymond Fine Fabrics
- Ross + Simons

Service Provider

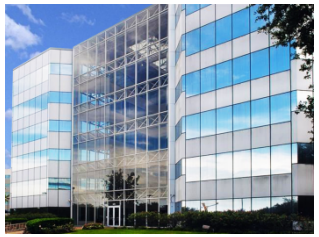
- AT&T
- Global Cloud Xchange
- FirstLight
- Avaya
- bcm one
- Reliance Communications
- FatPipe

Thank You

Salt Lake City, UT
Headquarters

Chennai, India
Regional Headquarters

Lagos, Nigeria



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