

A nighttime cityscape featuring tall skyscrapers with illuminated windows and light trails from traffic on a highway. The scene is dominated by blue and yellow light tones.

IP Technology Labs

Always Connected™

Always Connected.

The Most Reliable & Cost-Effective way to Securely Connect
your Remote Networks, IoT/M2M devices, & Cloud Applications



IP Technology Labs

Agenda

Who we are

Background

3 Market Forces

The Difficult Problem Only We Solve

IpTL's Unfair Advantage

Our Secret Sauce

Reference Applications

WHAT WE DO (*THAT NO ONE ELSE CAN*) - Absolutely Reliable Comms

IP Technology Labs

Always Connected™

FastLane™ VPN Tunneling gateways provide the **most reliable, cost-effective** way to **use any Internet** to securely **connect** your **remote IoT/M2M** devices and applications site-to-site.

Our Mission – Always Connected™

**We Design & Manufacture
IP/Ethernet Appliances**

Founded in 2009, HQ Baltimore, Maryland USA
Technology: Patents, Trade Secrets, Know-How
We do it: Engg, Manufacturing, & Logistics
Over 100+ Years in Access Networking Design
Global from the start – used in 71+ countries
7,300+ end points across every industry
Go to Market: Sell globally – Support locally



Three Market Forces – The Network has Left the Building

Social Forces

(emerging behavior)



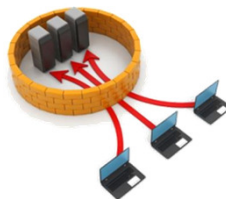
Economic Forces

(financial impact)



Technology Forces

(persistent evolution)



- **Devices, Apps, Users are Mobile and no longer “tied” to the office**
- **Internet is cheap and available**
- **Apps moving to the Cloud**
- **MPLS \$\$\$.** VPN’s don’t work
- **All are in-secure**
- **Aggressive provider filtering**
- **Connectivity breaks networking**
Dynamic IP, NAT’s, Firewalls
- **No Printers in the Cloud!**

What is So Hard about Networking IoT/M2M Devices & Apps

Connectivity lags behind performance innovation

Fragmented, one-off, siloed implementations

Devices & Apps always “assume” connectivity



1st wave was compute;

2nd wave was storage;

3rd wave is ??????

*(put the latest hyped-TLA of the day here:
SDN? NFV? NB-IOT? Web App?)*

FAIL miserably when they don't have Access IoT/M2M devices aren't WAN enabled

Security is an afterthought and weak

Links are aggressively blocked
IPsec is broke

Devices aren't Web apps
Cloud access is unsupported

5 Facts About IpTL FastLane Appliances You Should Know

When connecting **remote IoT/M2M devices** to your datacenter or cloud

IpTL's FastLane Gateways gives you the most

1 **Absolutely Reliable Links**

2 **Secure Edge-to-Edge networking**

3 **Cost-Saving – Opex & Capex!**

For all your devices, apps, & sites **over any Internet** connectivity

- Works with Dynamic IP/DHCP networks
- Secure and automatic redundant connectivity over multipath
- Fully transparent end-to-end networking. Open-sky for your apps
- IpTL gives your Cloud Virtual Applications seamless and truly secure access without blocks or hassles or “provider” dictated VPN's
- Out-of-the-Box Strong Security

IpTL's Unfair Advantage – Our Secret Sauce

We work where others can't - *Not a VPN*

We tightly integrate the **3 most important** elements of successful remote access networking into our appliances

- Advanced Path, Packet, & Content switching
- Automatic Transparent, Hidden, & Secure Tunneling
- Seamless L2 & L3 Network and Element Integration

only IpTL Has...

AutoConnect™

RealTimeResouce™

SystemMonitor™

HotelApp™ Captive Portal™

DHCPMangling™

BlackNoise™

IPshare™

FastLink™

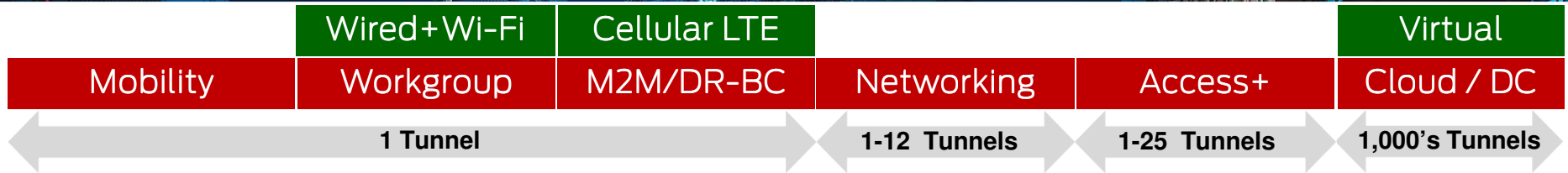
FlexPath™

Dynamic Path-switching Algorithms

Endpoint Tunneling Services

Access Connectivity Technologies

Scalable 1 to 1,000 of Networks- Endpoint, Server, & Virtuals



Model 7



- Wi-Fi + Wired Eth**
- Single User
 - USB for power
 - Multi Device Support

Model 7111



- Wi-Fi + Wired Eth.**
- 802.11 b/g/n
 - Target 100 Users/Devices
 - Single Tunnel Lic expandable

Model 7151



- LTE + Wi-Fi + Wired Ethernet**
- Integrated LTE
 - Internet Access
 - Auto Backup Failover
 - All ports can be used for tunnels

Model 7501



- Hi-Performance Remote Site**
- 1-12 Connections
 - IP Camera Backhaul
 - VoIP/UC Connectivity

Model 770



- 4X GiG Aggregator**
- 1-25 Connections
 - Connections are license scalable
 - Office VoIP UC
 - Expandable for additional sites

Model 79R



- 1U Rack Mount**
- 1U form Factor
 - 1,000's of users
 - 6x GigE ports

Model 70v



- VMWare ESXi
- Amazon AWS AMI
- Virtual Box
- Hyper-V/Azure

The Big Picture – Absolutely Reliable, Low-Cost, Secure

Users

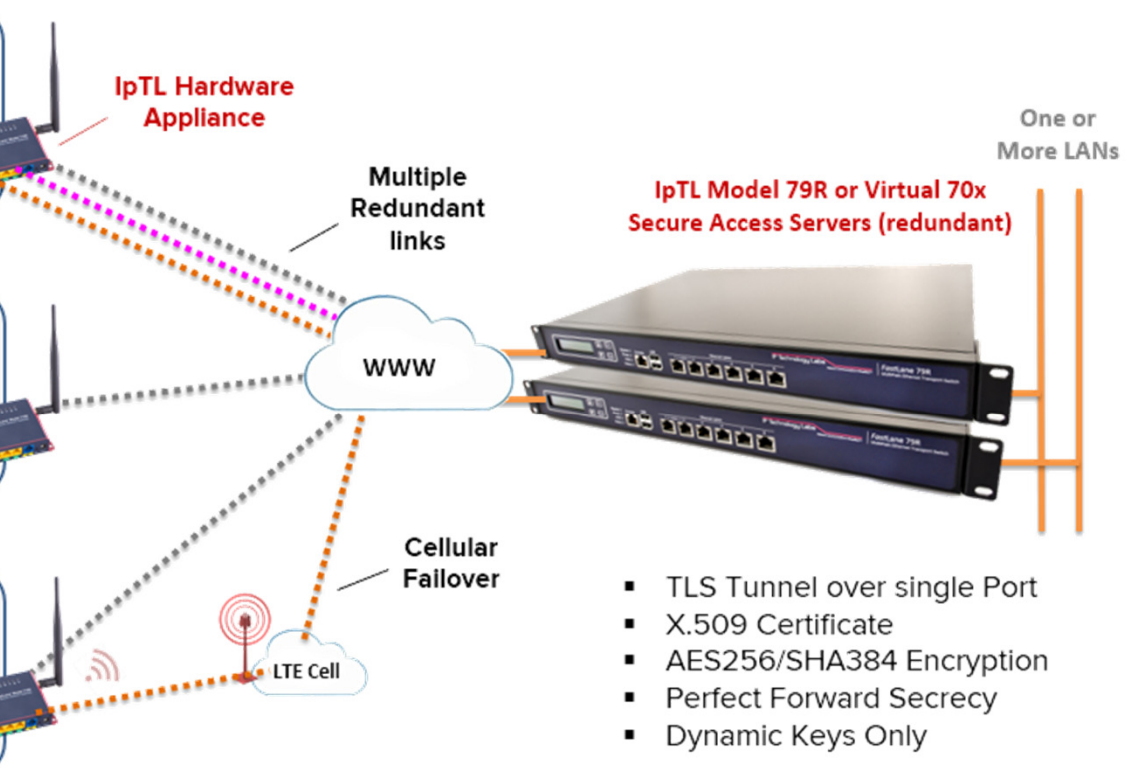


IpTL Hardware Appliance

Applications



Devices



- TLS Tunnel over single Port
- X.509 Certificate
- AES256/SHA384 Encryption
- Perfect Forward Secrecy
- Dynamic Keys Only

About IpTL *FastLane*™ Appliances – Quick Snapshot

- CE Mark, FCC, Canada, AUZ/NZ, UAE & Oman TRA certified
- **Works with Dynamic IP** – even on both ends of the link
- Can be installed behind a NAT on both ends
- Supports VLANs and VLAN trunking over IP networks
- **Data always goes between your devices**
- You can implement your own security & lock-down
- Client Independent - No software installed
- You can deploy with 100% Touchless deployment
- Not a service –You create your own link
- No recurring feature licenses
- **All endpoints are locally and remotely manageable**
- Designed, built, and shipped from the USA



Telecom Equipment Registration Certificate	
شهادة تسجيل منتج (إعتماد النوعية)	
Authorization Number :	ER0091039/12
Name of Registered Dealer :	IP TECHNOLOGY LABS LLC
Product Details	
Equipment Name :	LAN ETHERNET IT CONNECTIVITY EQUIPMENT
Model :	MODEL 70 SERIES
Manufacturer :	IP TECHNOLOGY LABS LLC
Applied Standard and/or Network Interfaces and/or Radio Services Spectrum Usage for which this authorization applies. Comments :	
Authorization	
وفقاً لمرسوم قانون الاتصالات واتاحة الصناعات ، والمسئولة المستمرة لهيئة تنظيم الاتصالات لتفهم قطاع الاتصالات، بحول هذا الترخيص لاستخدام المنتجات المذكورة أعلاه في الدولة وفقاً للشروط المحددة والمثبتة في الملحق الفنية.	
The Telecommunications Regulatory Authority, pursuant to its authority under the Federal Law by Decree No. 3 of 2003 – Telecom Law & the Executive Order of the Federal Law by Decree No. 3 of 2003 Regarding the Organization of the Telecommunications Sector, hereby authorizes the above product for the usage of specified subject to the conditions set out overleaf, attached on the second page.	
Date of Issue :	09-Jul-2015
Date of Expiry :	08-Jul-2018

Testimonials

“I just want to say “THANK YOU”. Today I ran over 30 concurrent calls over tunnel and **it worked perfect without any lag and issue.** - Amir, VoipLeaders

“**Tunnel is solid!** no issues at all.” - Sandeep, Dragon Oil

“*Very Clever!* ...the system **worked without any glitches.**”
- Diaa, Honeywell

“an **excellent product** at a **very attractive price** level.” -
Amer, Sony Dist

“**Saved the Day--** Your **redundancy kicked-in twice** when I was on holiday.”
- Dr. Robin, Veterinary Clinics



AVAYA

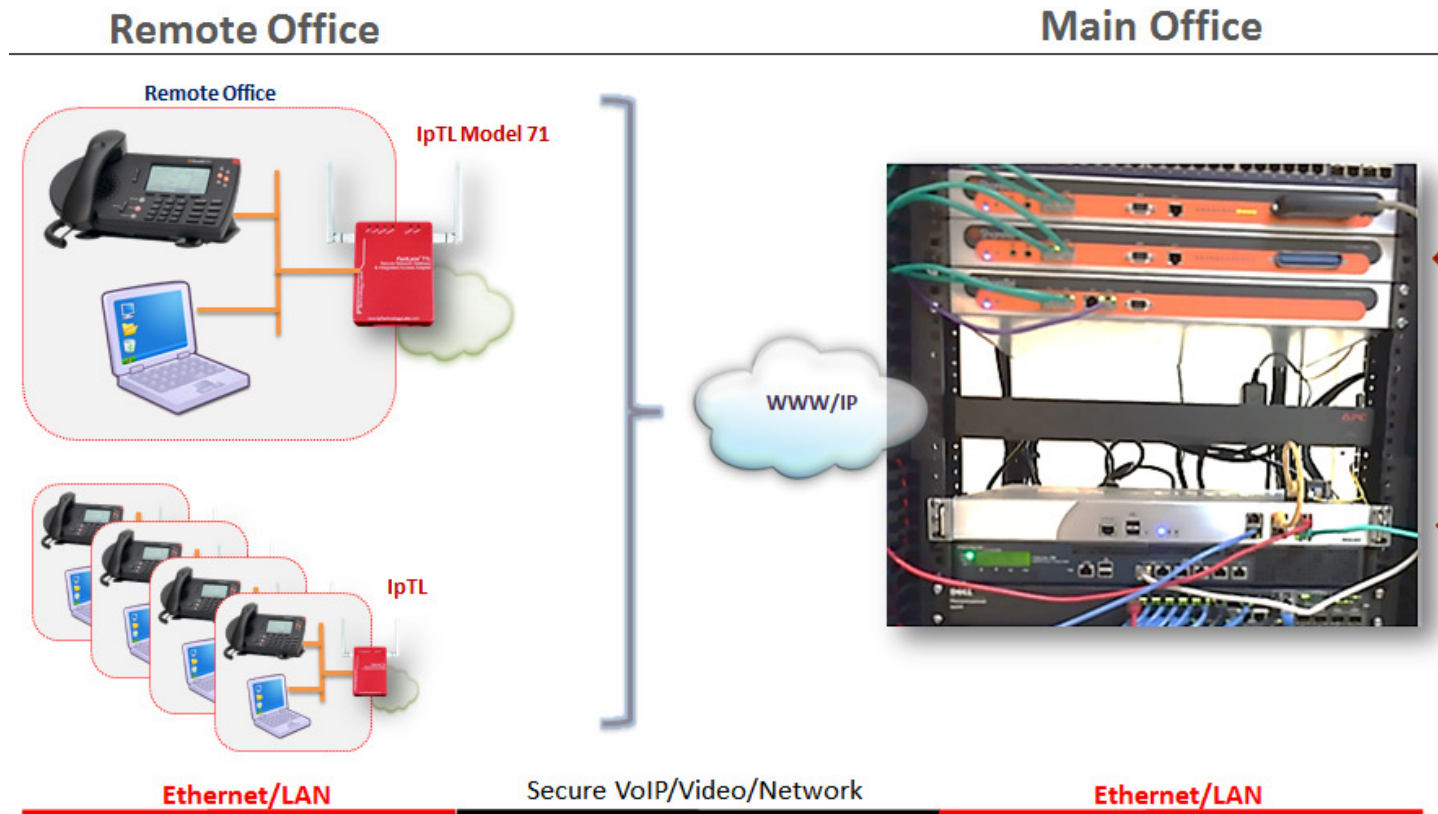


Honeywell



GENERAL DYNAMICS

Application: Remote Site Integration

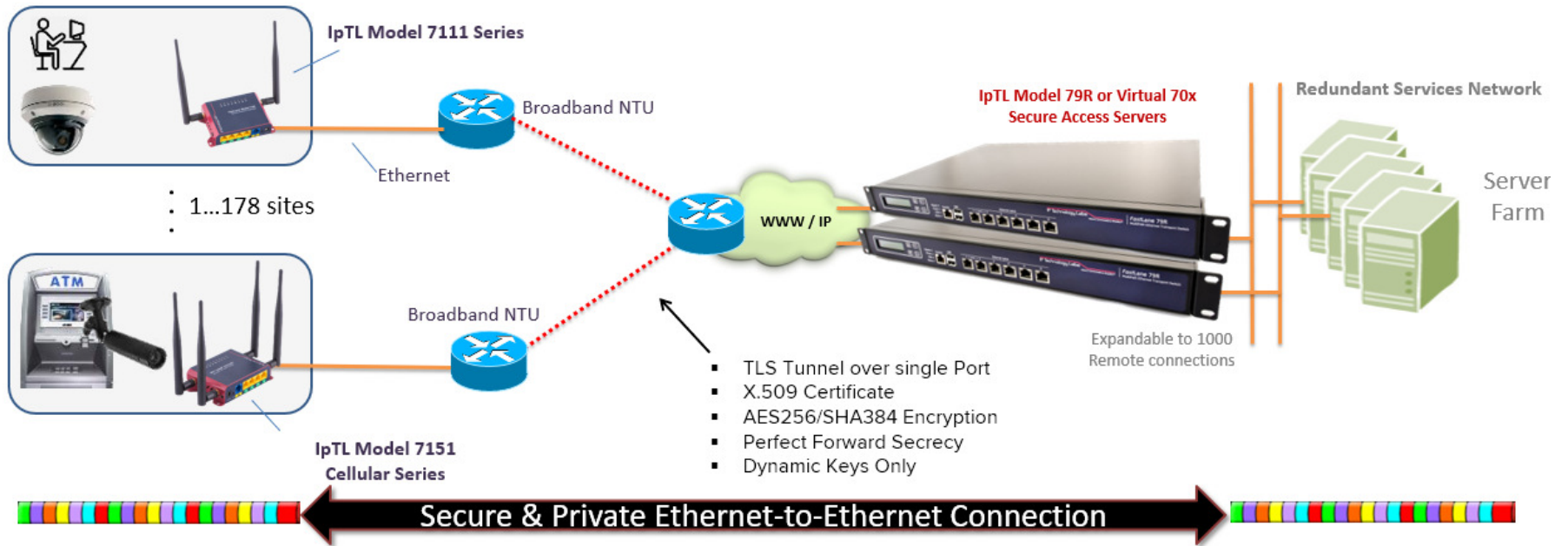


Remote IP Camera Backhaul

Remotes

Bank Data Processing Headquarters Site

- Unlimited Users / Hosts
- Unlimited IP/Networks Subnets
- Unlimited Users
- Unlimited Users

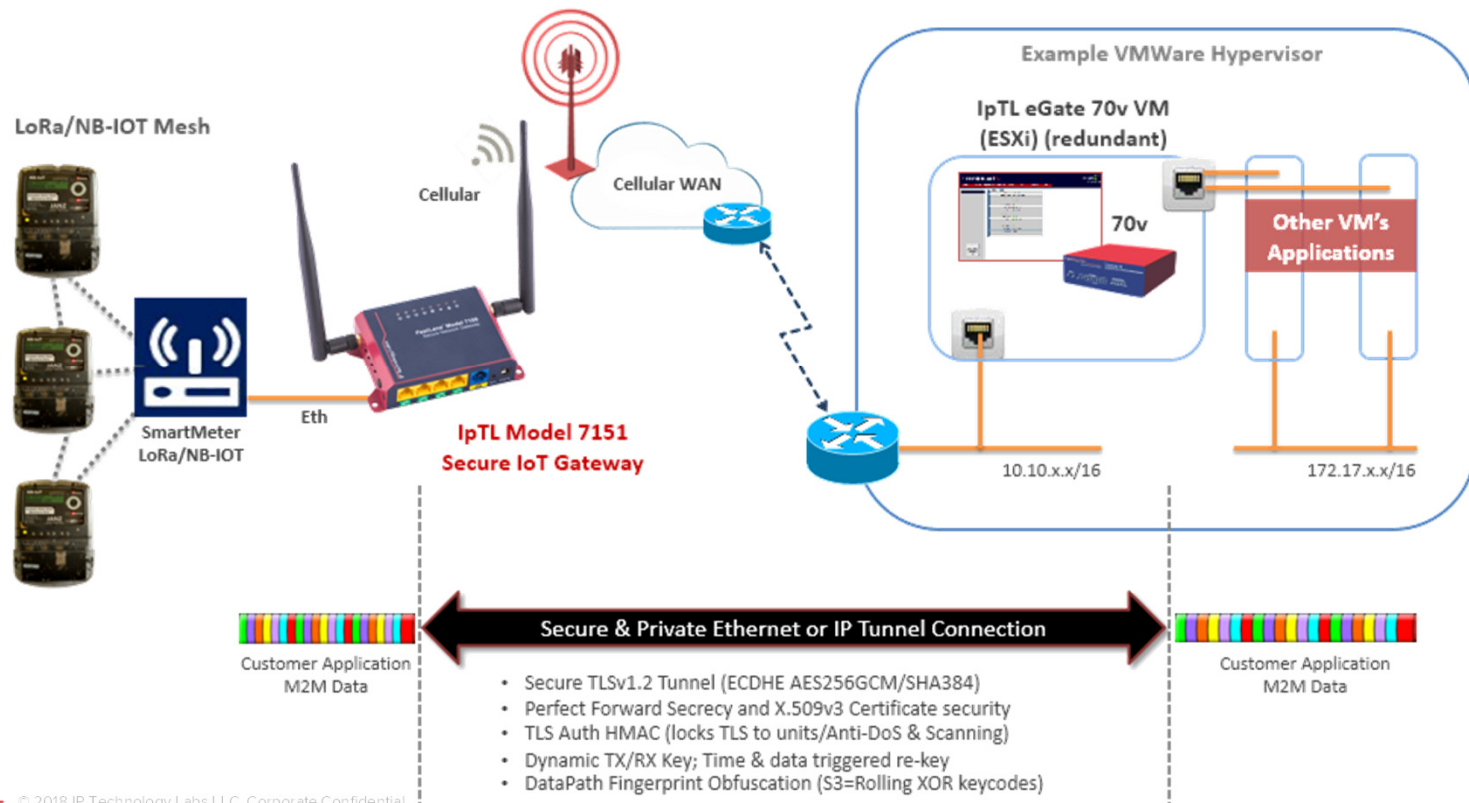


IoT Trunking SmartMetering

Field Metering

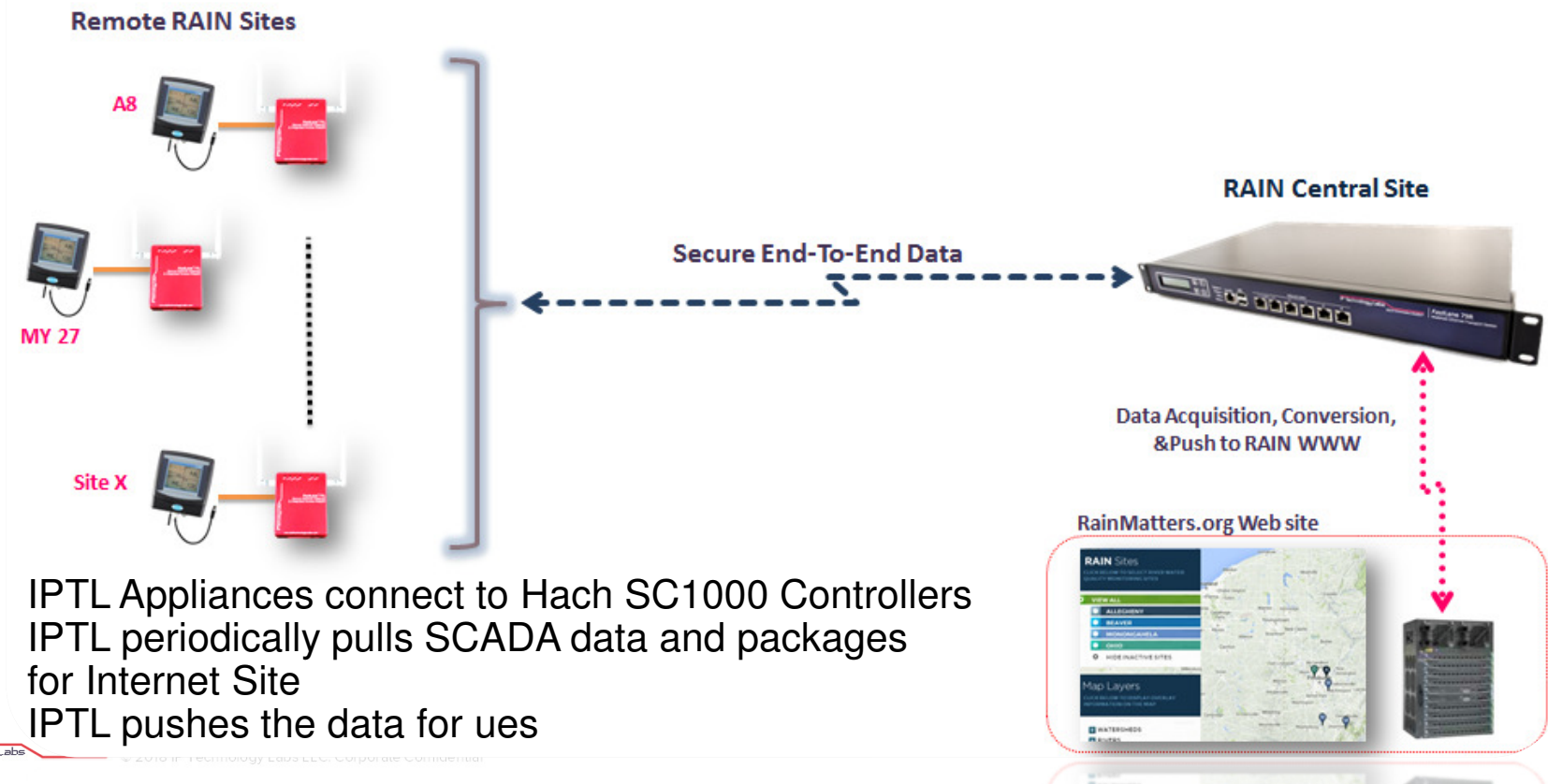
LTE IoT Gateway

Central Cloud Platform



M2M PLC Integration – Industrial Water Monitoring

End-to-End Connections



- IPTL Appliances connect to Hach SC1000 Controllers
- IPTL periodically pulls SCADA data and packages for Internet Site
- IPTL pushes the data for users

Quick Case Study – M2M Access Control

Challenge Consolidated Personnel Identity Management over large geographic location

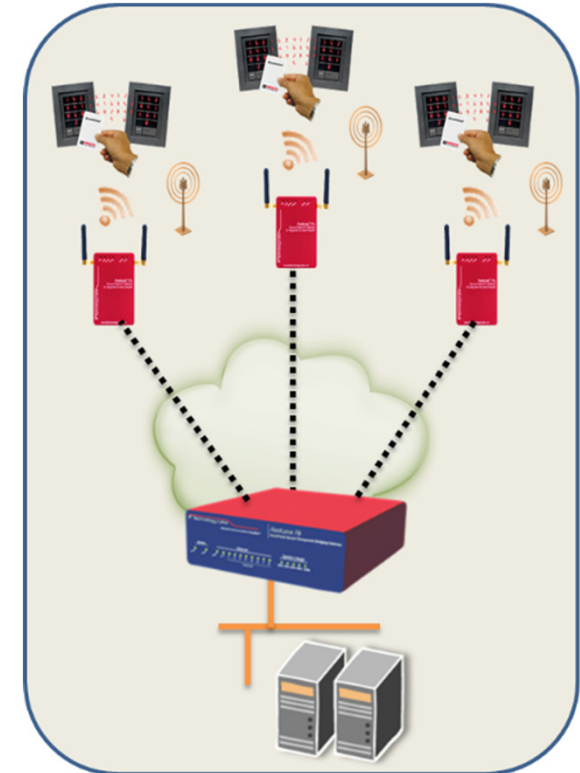
- Construction site access control for 10,000 personnel growing to 120,000+ personnel in 9 months
- Personnel housed at 26+ different towns each run by a different contractor
- General datacom facilities not universally available, not standardized, or add large overhead expenses; many sites in “dark zones”

Solution IpTL Model 71 with Integrated 3G Model for Secure & Redundant Connectivity

- IpTL solution provides transparent, redundant, and secure connectivity for Access Panels regardless of physical location or infrastructure
- Each remote location uses generic cellular data infrastructure from one or two Tier-1 Service providers
- Standardized solution without requiring modification to customer or contractor systems

Outcome Efficient and low-cost Worksite, Personnel, & Operations Management

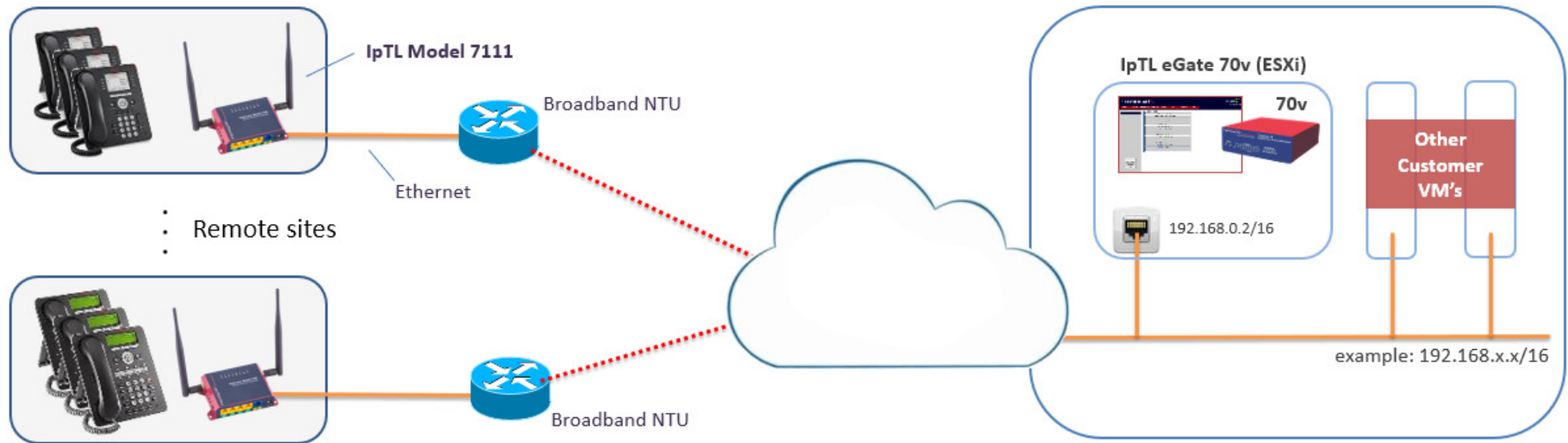
- Credentialed personnel are permitted/denied access to the work-site prior to approaching facility (workers are simply dropped off at the worksite)
- Consolidated IT infrastructure eliminates duplicate systems; is independent of contractor, housing site size or available communications infrastructure
- Honeywell solution scales as personnel requirements expand and contract with lowest-cost operational overhead



Hybrid Cloud Access – Physical Remotes to VPC

Remote Sites

Cloud



Physical Remotes

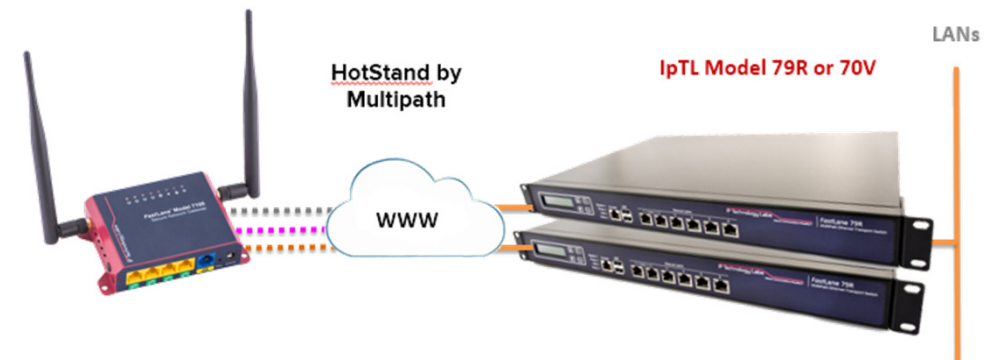
Cloud/Datacenter



Remote NON BLOCK TUNNEL BOND Multipath HotStandby

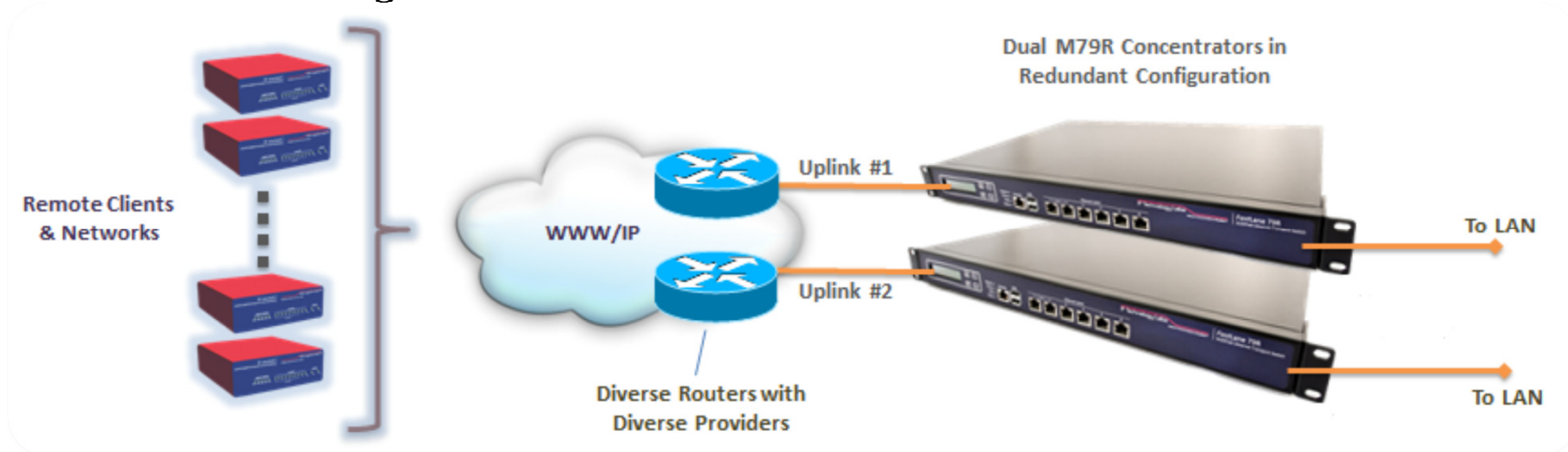
- **3 tunnel ports from remote**
 - 1201 UDP
 - 1200 UDP “S3” BlackNoise
 - 443 TCP “S1” BlackNoise
- **All Tunnels are UP**
 - Only one active at a time
“Primary”
- **Automatic failover in order if Primary goes down**
- **Automatic restore back to primary**
- **ALL TRANSPARENT TO USER**

Remote:	Port:	Protocol:	Cipher:	Cipher Support:
1: 02-02-79-C	1201	UDP	AES 256 bit CBC	<input type="checkbox"/> S1 <input type="checkbox"/> S2 <input type="checkbox"/> S3
2: 02-02-79-01-...	1200	UDP	AES 256 bit CBC	<input type="checkbox"/> S1 <input type="checkbox"/> S2 <input checked="" type="checkbox"/> S3
3: 02-02-79-01-...	443	TCP	AES 256 bit CBC	<input checked="" type="checkbox"/> S1 <input type="checkbox"/> S2 <input type="checkbox"/> S3



Typical Redundancy with IpTL – Fallback and Failover

- Large concentration of remote users at the central site.
- When 100% guaranteed access to the central site is required.
- Protection from Link, Provider, & Equipment failure is required *at the same time*.
- Positive indication that the backup is available and active. (e.g. Hot Active) even when it is not being utilized.



Leased Line Replacement

- Competitive carrier offering hosted Video conferencing needs easy and secure connectivity
- International connection over Commodity Internet

Solution Highlights

Challenge

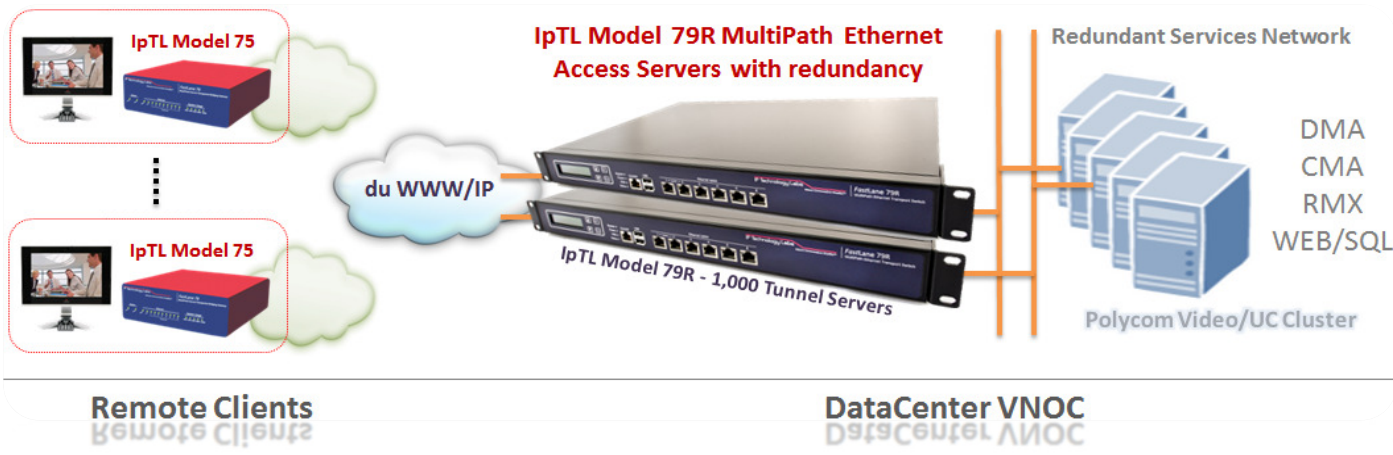
- Provide remote access for users of hosted Polycom telepresence and conferencing regardless of location
- Video/UC blocked by NAT or country proxies - Traditional VPN didn't work due to dynamic IP
- MPLS or Leased-Lines expensive or not universally available
- Incomplete Security, Privacy & Control

Solution

- Redundant IpTL Model 79R servers in data center
- Model 75 end-points at remote sites.

Results

- Transparent and secure Ethernet from remote Video clients to hosted MCU service
- Plug-and-play quick deployment
- Use any Internet connection with no network, NAT, firewall or provider blockages. Works with Dynamic IP on both ends of the link - No Static Public IP required
- Full End-to-End manageability for quick support and provisioning.



Price Performance Leader

Vendor -> Solution ->	IpTL FastLane	Cisco Systems ASA 5506-X	SonicWALL TZ/Soho	Telecom MPLS	Avaya ONA (Cloud only)
Total cost per link (25 link / 3 years) price	\$667.18	\$2,311.90	\$698.86	\$360,000.00	\$3,345.00
Live Engineer Setup Support	Yes	No	No	No	No
Presales response within 1 hour	Yes	No	No	No	No
Postsales response within 1 hour	Yes	No	No	No	No
Full Proposal Creation on Request (presales/channel/customer)	Yes	No	No	No	No
Free Lifetime Software Updates	Yes	No	No	No	No
Custom OEM Opportunities	Yes	No	No	No	No
Free 30 day evaluation/return option	Yes	No	No	No	No
Spare-in-Air RMA process for in warranty items	Yes	No	No	No	No
2 year warranty hardware warranty standard	Yes	No	No	No	No

Lowest per-link

No recurring costs for licenses or features use

BEST support of any vendor!

SEE FULL XLS SPREAD SHEET FOR OVER 200 MATRIX ITEMS!

How Does It Compare?

ROBUST Access Router and Endpoint

BEST Tunneling/VPN Connectivity

HIGHEST Availability & Redundancy

HIGHEST Security & Privacy

BEST Device Management

BEST Mobile Secure “Hardware”
Connectivity

	IPsec	Cisco Systems	Cisco	SecureWALL	SecureWALL	Enterasys	Arcady
	1 (not for 7.5, 8.1, 8.2)	8.5, 9.0, 9.2	Any/Current/Prev	7.2/8.0	Current/Prev	8.0/9.0	8.0
robust Featured Access Endpoint							
support & Maintenance:							
Live Engineer Remote Support	Yes	NO	NO	NO	NO	NO	NO
Proactive response within 1 hour	Yes	NO	NO	NO	NO	NO	NO
Proactive response within 1 hour	Yes	NO	NO	NO	NO	NO	NO
Full Proposal Creation on Request (pre-authorized customer)	Yes	NO	NO	NO	NO	NO	NO
Free Lifetime Software Updates	Yes	NO	NO	NO	NO	NO	NO
Custom OEM Capabilities	Yes	NO	NO	NO	NO	NO	NO
Free 30 day evaluation/return option	Yes	NO	NO	NO	NO	NO	NO
Open to 3rd party products for non-voice feature	Yes	NO	NO	NO	NO	NO	NO
2 year warranty hardware warranty provided	Yes	NO	NO	NO	NO	NO	NO
Management capabilities/Features:							
Unified solution for Remote Access & SD-WAN	Yes	NO	NO	NO	NO	NO	NO
Does not require Shell/Command Line Interface	Yes	NO	NO	NO	NO	NO	NO
Web GUI/Console (for both full control/limited management)	Yes	NO	NO	NO	NO	NO	NO
Secure out of band management (no internet connection to Headend)	Yes	NO	NO	NO	NO	NO	NO
Single and Captive Portal Login	Yes	NO	NO	NO	NO	NO	NO
Authentication - no post-forwarding	Yes	NO	NO	NO	NO	NO	NO
One click setup - login and get Only the mac of address	Yes	NO	NO	NO	NO	NO	NO
No touch configuration (PTP) - just PPTP/SSL	Yes	NO	NO	NO	NO	NO	NO
Single management interface across all products (shows one I know all)	Yes	NO	NO	NO	NO	NO	NO
Clean PCOIDS 1.2 spec - NO EXECUTION	Yes	NO	NO	NO	NO	NO	NO
Access Endpoint Features:							
High Availability Clusters in active/active or active/passive	Yes	NO	NO	NO	NO	NO	NO
User defined Edge level path-routing (CPI) (per matching)	Yes	NO	NO	NO	NO	NO	NO
Undefined number of inside interfaces	Yes	NO	NO	NO	NO	NO	NO
Undefined number of outside interfaces	Yes	NO	NO	NO	NO	NO	NO
Ethernet LAN Extension (span 2)	Yes	NO	NO	NO	NO	NO	NO
Natively transports LAN broadcast domain (no emulation required)	Yes	NO	NO	NO	NO	NO	NO
End-to-end VLAN	Yes	NO	NO	NO	NO	NO	NO
16 Address per Edge MTU	Yes	NO	NO	NO	NO	NO	NO
Full off-traffic changing network (STUB and/or inline)	Yes	NO	NO	NO	NO	NO	NO
Undefined Network Interface	Yes	NO	NO	NO	NO	NO	NO
Undefined Network Ports	Yes	NO	NO	NO	NO	NO	NO
Undefined VLANs	Yes	NO	NO	NO	NO	NO	NO
Can manually import non-IP ports	Yes	NO	NO	NO	NO	NO	NO
Can manually import non-IP ports	Yes	NO	NO	NO	NO	NO	NO
Virtual Floating Forwarding (VFF) - policy rate	Yes	NO	NO	NO	NO	NO	NO
Overlapping IP address support (static and dynamic) - ipshare	Yes	NO	NO	NO	NO	NO	NO
Connectivity & VPN							
Secure as defined	Yes	NO	NO	NO	NO	NO	NO
Unsecure Options Blocked out (Captive Portal)	Yes	NO	NO	NO	NO	NO	NO
Tunnel Fragmentation Detection	Yes	NO	NO	NO	NO	NO	NO
Towards work block broadcast networks	Yes	NO	NO	NO	NO	NO	NO
Less than 100k to setup and connect	Yes	NO	NO	NO	NO	NO	NO
SECURITY/Advanced Security	Yes	NO	NO	NO	NO	NO	NO
Single platform for Site-to-Site and Remote Access	Yes	NO	NO	NO	NO	NO	NO
Port-based VLAN based	Yes	NO	NO	NO	NO	NO	NO
Towards non-IPv4 network	Yes	NO	NO	NO	NO	NO	NO
VPN Mobile Client							
Client for smartphone - Non-Required	Yes	NO	NO	NO	NO	NO	NO
TLSv1.2 native - No Software Required	Yes	NO	NO	NO	NO	NO	NO
PPPT	Yes	NO	NO	NO	NO	NO	NO
OpenVPN/Compatibility	Yes	NO	NO	NO	NO	NO	NO
Hardware USB Adapter - Non-Required (no client needed)	Yes	NO	NO	NO	NO	NO	NO
Key Applications/Protocols:							
Not subscription based (non-voicemail)	Yes	NO	NO	NO	NO	NO	NO
Application control with IP patterns - related to go (includes)	Yes	NO	NO	NO	NO	NO	NO
Application control based on category (the security list - includes)	Yes	NO	NO	NO	NO	NO	NO
Authentication:							
Secure remote access to natively login without domain	Yes	NO	NO	NO	NO	NO	NO
Captive Portal - login (username - ppt & auth token (publishing))	Yes	NO	NO	NO	NO	NO	NO
Identity Based Policy control (includes)	Yes	NO	NO	NO	NO	NO	NO
Behavioral Analysis (on endpoint or browser) - lock identity	Yes	NO	NO	NO	NO	NO	NO
8-11:							
Single NAT/Filter on control center	Yes	NO	NO	NO	NO	NO	NO
Central monitor and manage all AP's	Yes	NO	NO	NO	NO	NO	NO
Bridge AP to LAN, VLAN or Zone	Yes	NO	NO	NO	NO	NO	NO
Multiple QoS support	Yes	NO	NO	NO	NO	NO	NO
Simultaneous STAN/tek and Access Point operation	Yes	NO	NO	NO	NO	NO	NO
Vendor agent for access control center	Yes	NO	NO	NO	NO	NO	NO

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5. Out-of-the-Box strong security

A long-exposure photograph of a city street at night. The image shows light trails from cars and buses on a multi-lane road. In the background, several tall skyscrapers are illuminated with blue and white lights. The overall scene is a vibrant, modern urban environment.

IP Technology Labs

Always Connected™

Thank you for your Attention!

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IP Technology Labs

Agenda

How to Sell





When you have **IoT, VoIP/,Video, UC, LAN Networking**, or solutions such as **IP Cameras, Digital Signage, Access control**



IpTL eliminates the difficulties of VPN/Remote Access connectivity: Lack of End-to-End Communications Security; Recurring costs of MPLS or VPN's; Delays or Blockages to Deployment



Your Benefits when **deploying IpTL** as part of your solution

Works over any IP network Securely	Lower costs for your Solution Deployment	You Control Your Security	Deploy now without rip-out or change	Users and Applications Work properly	Scalable with Top Support
-------------------------------------------	-------------------------------------------------	----------------------------------	---------------------------------------------	---------------------------------------------	----------------------------------

How to Sell - Customer Approach

What's my Pitch

- **YOU NEED:** Remote access, S2S VPN/, or Secure Tunnel which unblocks & securely connects your networks over low-cost Internet, *easily*
- **IpTL Provides:** networking appliances which enable complete and fully functional network connectivity easily, securely, and automatically
- What are we: **The World's Longest Ethernet Cable**
- The IpTL Difference are features not found in a single provided solution big-box or software vendor in the market today.



How to Sell - Customer Approach

Who are my target customers?

- **IT managers are always seeking CONNECTIVITY**
 - How do get User/App/Server/Site to talk to the mothership
 - Always say they want security; but they WON'T BUY security (exception: Gov'ts and bad guys)
- **IT network guys (the actual engg's) don't know how their network really works.**
 - The big bosses know even less!
 - Get the support services contract – it is your value add



How to Sell - Customer Approach

Who are my target customers?

- **Medium to Large Enterprises with MULTIPLE LOCATIONS - Site-2-Site (S2S)**

- Medium to Large enterprise (*soho/robo*)
- Banks – (*branches, ATMs*)
- Gov't Agency's (*remote offices*)
- Utilities – (*IoT/M2M*)

- **Small Enterprises have a need but little money**

- Capture annual support contract or pass;
- Wants IT support for free...knows the value –but always trying to slip-it-in as part of the deal
- Scale is small but can be lucrative



How to Sell - Customer Approach

■ Customers moving to Cloud Hosted Apps

- By definition makes remotes out of everyone who needs to connect
- It's really Hybrid-Cloud (public or private)
 - Public Cloud = AWS, Azure
 - Private Cloud = VMWare, Hyper-V (own DC)

■ The problems with Cloud hosted Apps

- How do I have my office users PRINT locally? (*peripheral connectivity*)
- How do I have security for my data-in-motion? (*keep my privacy*)
- How do I ensure redundancy/availability? (*keep my users productive*)

Options today from Amazon, MS, VMWare & others – “do an IPsec VPN” or buy our leased line services – *you are on your own.*



How to Sell - Customer Approach

▪ **Leased-Lines/MPLS users**

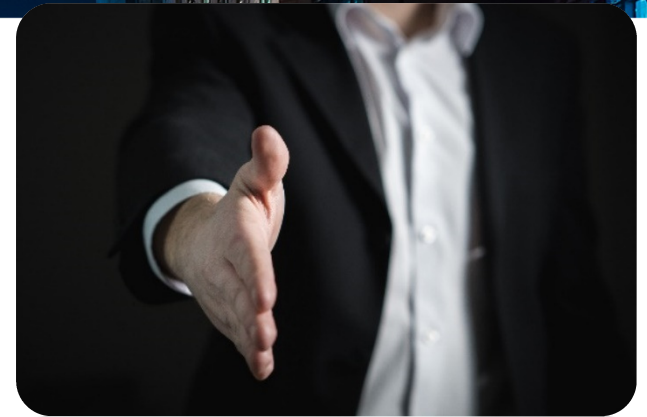
- Generally professional organizations employ
- Used to like the “SLA” piece but in reality doesn’t deliver – down is down
- Active market shift away from carrier

▪ **Problem**

- Carrier Services are really expensive
- Are not redundant – just buy 2x lines then; no cellular option “diverse path”
- Bandwidths are typically a fraction of cheap commodity Internet links

▪ **Opportunity**

- Lower costs
- Gain Functionality – both S2S, Cloud, Redundancy, and Applications
- Control of connectivity – Why wait 8 weeks to get provisioned?



How to Sell - Customer Approach

- **Remote Access – S2S – VPN**

- Mobility Remote Access/ BYOD
- Network Extension – LAN over Internet

- **Problem**

- ERP and Database connectivity
 - Oracle, NetSuite, SAP
- Multisite Integration blocking business processes
- Single point of failure a business driver – *7151 Cellular Opportunity!*
- Can't use IPsec...The Dynamic IP Issue

- **Opportunity**

- Fixing broke IPSec VPN – Drops & Blocks
- Dynamic IP
- Integration of compute sites and users
- Gain Functionality – both S2S, Cloud, Redundancy, and Applications



How to Sell - Customer Approach

■ Internet of Things – IoT/M2M

- Sensors, VoIP/UC, Access Control, IP Cams
- Non-existent or constrained security (scary!) →

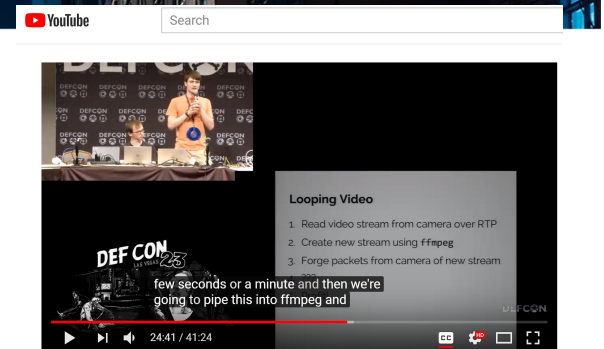
- <https://www.youtube.com/watch?v=RoOqznZUCII>

■ Problem

- PLC's are often not networking agile – locked subnets
- Single point of failure a business driver
 - *7151 Cellular Opportunity!*
- Can't use IPsec...The Dynamic IP Issue

■ Opportunity

- Securing critical infrastructure
- IP cameras & Access Control Connectivity & Security
- Integration of compute sites and users
- Gain Functionality – both S2S, Cloud, Redundancy, and Applications



DEF CON 23 - Van Albert and Banks - Looping Surveillance Cameras through Live Editing



How to Sell - Customer Approach

■ VoIP/UC

- IP Phones (Avaya, Cisco, ShoreTel, Polycom)
- Video Conferencing/Teleconferencing/UC

■ Problem

- VoIP likes to be on the “same network”
- WAN issues with NAT traversal & VLAN cause headaches
- IPsec a problem...The Dynamic IP Issue
- Filtering & proxy's cause legal connectivity issues

■ Opportunity

- Integration of remotes to headend – truly unified
- Availability and Security
- Permits not just VOIP phones but whole office connectivity back to HQ



Customer Questions, Objections, and Answers

▪ I can just do that with IPsec (No you can't.)

- IPsec needs a public (real) IP on at least the server side (HQ) – this is what breaks dynamic IP
- IPsec is L3 only and uses the IP address as part of the security association
- Is routed only with no route distribution protocol (extra)
- Has about 15% overhead penalty – lost bandwidth
- L2 or VLANs need GRE + IPsec – extra overheads, complications, etc.
- Dynamic crypto keys requires an entirely parallel configuration
- Is an easily filtered “IP PORT”
- MTU do-not-frag issues for TCP
- Extremely difficult to configure AND maintain security
 - Most people just use Pre-Shared Keys (one time)
- Usually a “vendor religious” choice – technically inferior today.



Customer Questions, Objections, and Answers

I can just do that with IPsec (No you can't.) CONT'd

▪ IpTL Advantage

- We use TLSv1.2 (next gen standard) as the transport
 - X.509v3 certs standard
 - IpTL can be installed on private IP – on both ends of the link
 - IpTL can use DYNAMIC IP Links
 - DYNAMIC KEYING Standard -- NO PRESHARED KEYS.
 - Can use any port UDP or TCP (our standard is 5150)
 - About a 6-7% overhead before our compression!
 - User defined connection key (TLS-Auth) for closed user group
 - User defined and control of “rekeying” times
 - Perfect Forward Secrecy standard (rolling private keys!)
- See our **TLS vs. IPsec White Paper** for breakdown



Customer Questions, Objections, and Answers

- **What encryption do you run? Can someone see my data?**
 - Our standard data encryption is AES256/SHA1 HMAC
 - NOTE: No different than IPsec when using AES cipher options
 - Moving to AES256GCM / SHA3 *next gen efficiencies*
 - No, someone can't see your plain data or understand what you are sending.
 - Also, based on our X.509v3 certs a Man-in-the-Middle attack will fail as you can't fake back-to-back certs (e.g. SSL strip tool)
- **Isn't this just HTTPS?**
 - No, HTTPS can use a range of security options such as SSL, TLS, etc. There is NO cipher negotiation with IPTL. You are assured of the highest level of security connection.

Customer Questions, Objections, and Answers

▪ What is your Support Server? Can someone see my data?

- Support Server is our own out-of-band management portal
 - We use it for tech support
 - Customers can purchase subscriptions for fielded device management
 - Customers can purchase their own Support Server to remain completely independent if so desired.

– No, it is only configuration of the unit and there is no access to customer data.

– Additionally, a customer may TURN OFF Support Server connectivity at any time.

The screenshot displays the IP Technology Labs web management interface. The top navigation bar includes links for HOME, FLEXPATH, NETWORKING, TUNNEL, TOOLS, IP_FILTER, and LOGS. The left sidebar menu shows options for HOME, Overview, Config (selected), Users, ImageMgmt, SNMP, and License. Below the menu are buttons for Reboot, Save Config, Reset Factory, and Logout. The main content area is divided into several sections:

- System Time:** Shows the current time as Sun 2017-12-17 05:25:38PM EST. Primary and Secondary NTP Servers are set to pool.ntp.org. The last NTP attempt is marked as PASSED.
- System Information:** Displays Hostname (IPTL Main Gateway 02-02-79-00-06-00), Domain Name (none), Web Page Title, Timezone (USA & Canada Eastern Time), Syslog Server IP, and Syslog Server Port (leave blank for default (default = port 514)).
- Webserver Config:** Shows IPTL Certificate Authority (IPTL CA), Web Server Port (81), Default Web Page (Default Page Client Wireless), HTTPS Compatibility Options (HTTPS Strict), and SSL Server (enabled).
- Support System Configuration:** Includes Enable Support Management (Enable Support System), Support Management Status (Support System Down), and Enable Real Time Resource (Enable Real Time Resource).

Customer Questions, Objections, and Answers

▪ What do you do to keep from getting blocked?

– Blocks happen for a variety of reasons – Gov't/Political/Cultural; Carrier-to-Carrier peering issues; firewalls; misconfiguration; you name it.

– Basic TLS tunnel obfuscation

- IpTL has three “S” modes to statically or dynamically remove any TLS fingerprints from stream. (Important for China, Iran, Turkmenistan, etc)

Cipher Support:

S1 S2 S3 S4

– Advanced Packet obfuscation

- IpTL also has packet based compander which ensure the packet sizes are automatically expanded to a larger size and then shrunk on the headend. Prevents “traffic analysis” type filtering

– Advanced Stream obfuscation

- IpTL can cap the bandwidth of a stream so that bandwidth level filters don't trigger

Customer Questions, Objections, and Answers

▪ I'll just get a Mikrotik or config my own Linux VPN

- Mikrotik is cheap – but no serious IT manager will go with this way
- Very well known and established in the Wi-Fi market
- You have to config each one manually, troubleshoot, linux-like
- Limited VPN automation – drops, blocks, etc.
- Hardware has high-failure rate – warranty is just throw-away
- Doesn't have the IPTL anti-blocking features such as AutoConnect, Obfuscation, MAC based DNS, or System Monitor Redundancy
- Latvian vs. USA --- You decide.
- No PCI cert! – IpTL is the only PCI 3.2 100% passing!
- “Limited support service might be provided by e-mail for 30 days”
- Warranty: “Term of twelve (12) months from the shipping date”
- Throw-away if failed – *customer down time?*
- Did I say cheap...

My question to the market: “*If Mikrotik is so great, then why does anyone still buy Cisco, Juniper, Sonicwall, etc..*”

Action: Move to demo and win the mind first then the heart

The Process for an Interested Customer

▪ Identify Need

- Multisite; Connectivity issues; Cost reduction cycle; LL/MPLS

▪ Information & Education

- Send 3x Security White Papers
- Proforma design proposal

▪ Demo/POC

- Show them the IpTL Solution working (you should have already done the basic Magic Show to our demo server)
 - Do a simple LAN extension Point-to-Point
(<http://doccentral.iptechnologylabs.com/index.php/doc/iptl-hardware-quick-start-guide/#2195>)
 - Manage the expectations here – Conditional PO for multisite

▪ Quote, Close, & Install

- Let us help! – Proposal creation, Customer Conference calls, Competitive



Why Partner with IpTL?

- **Connect us with your solutions team**
 - Field-Application-Engineers
 - Pre-Sale Solutions Architects
 - Sales Teams
- **IpTL Enable's your Multisite Requirements**
 - Recommend IpTL for remote site requirements
 - We are not marketing for rip-out or substitutions
 - Complimentary to your Solutions
- **Customer Satisfaction**
 - IpTL will create RFQ/RFP proposals and content
 - Let us provide your live hands-on technical support
 - AccessEdge™ partner programs protect your projects



Additional Resources

▪ FastLane Forum –

<http://doccentral.iptechnologylabs.com>

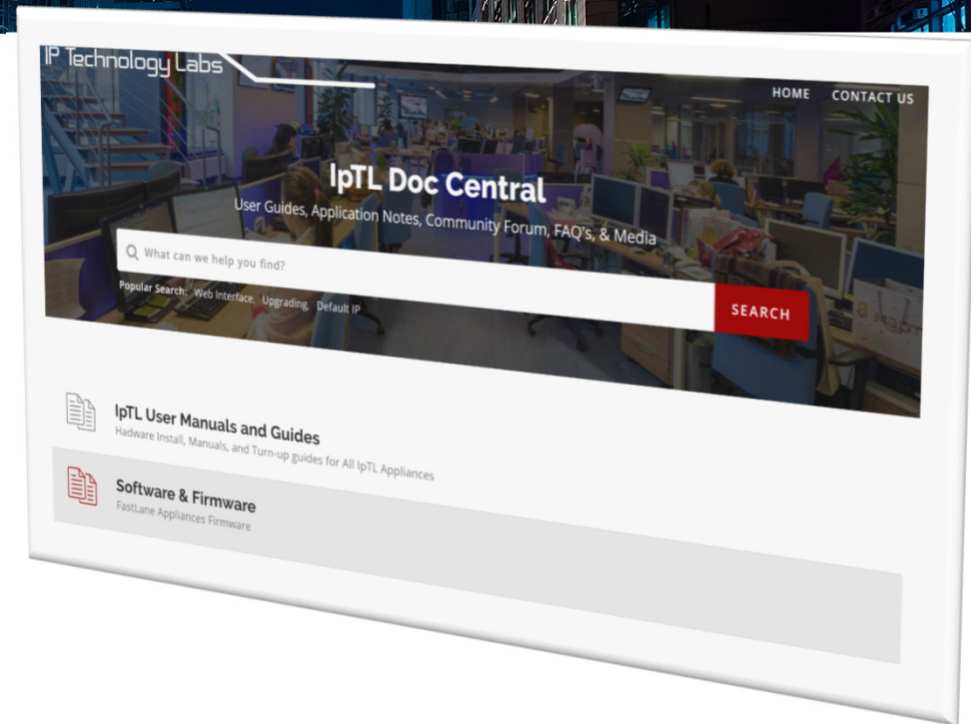
- App Notes
- Marketing Info
- Community Questions & Answers
- Proposal Templates

▪ IpTL Demo Server

<http://demo.IpTechnologyLabs.com>

User = monitor

Pass = monitor



A long-exposure photograph of a city street at night. The image shows light trails from cars and buses on a multi-lane road. In the background, several tall skyscrapers are illuminated with blue and white lights. The overall scene is a vibrant, modern urban environment.

IP Technology Labs

Always Connected™

Thank you for your Attention!

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