Peplink Presentation

Subtitle or Date

Who We Are

Company History

- Founded in **2006**
- Over **30+ granted patents** regarding our SpeedFusion SD-WAN technology
- **Comprehensive WLAN Solutions** for any deployment

Small, Passionate Team

- **127-person** team
- **81** Dedicated R&D Engineers

Direct Communication

- **Forum.peplink.com**
- Have direct communication with partners and end-users
- Dynamic and passionate team members stand ready

Global Brand

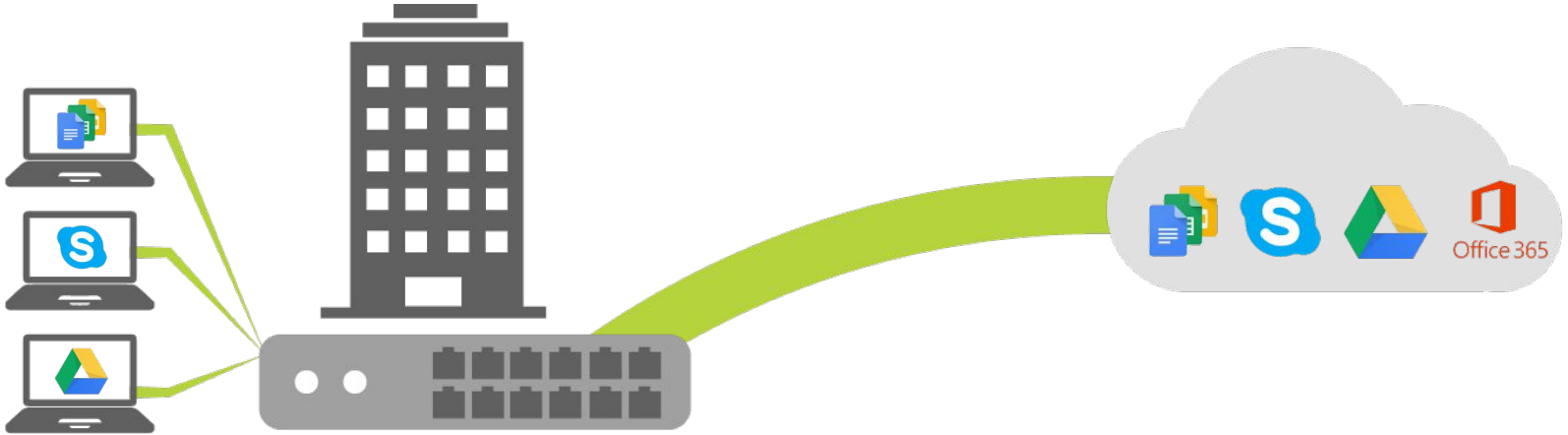
- Over **500+ Partners/Resellers** in roughly **70 countries**
- Satisfied global customers

Recognized by Gartner

Gartner's report shines a light on the brightest and most capable companies, and Peplink's expertise has earned us a spot on this prestigious report.

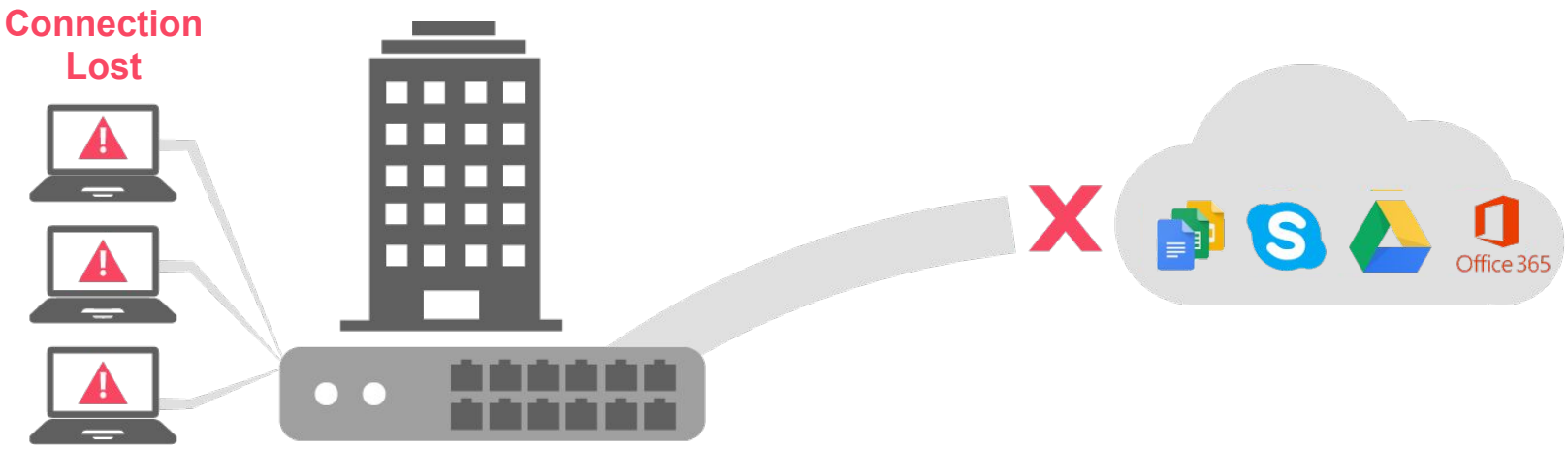
Peplink Advantages

Unbreakable Connectivity



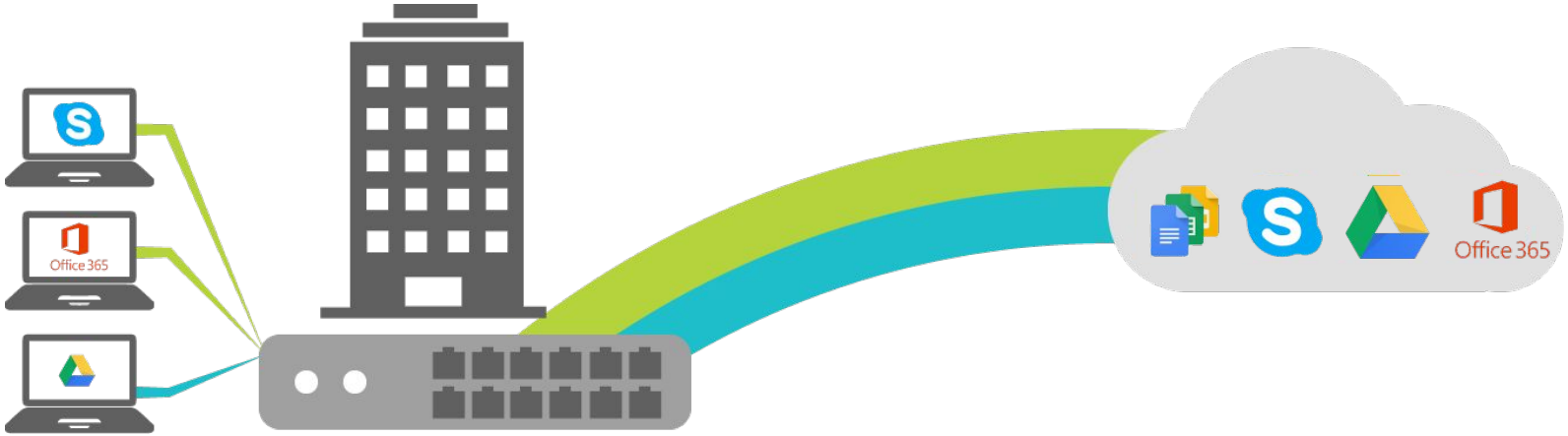
Your cloud apps require constant connectivity.

Unbreakable Connectivity



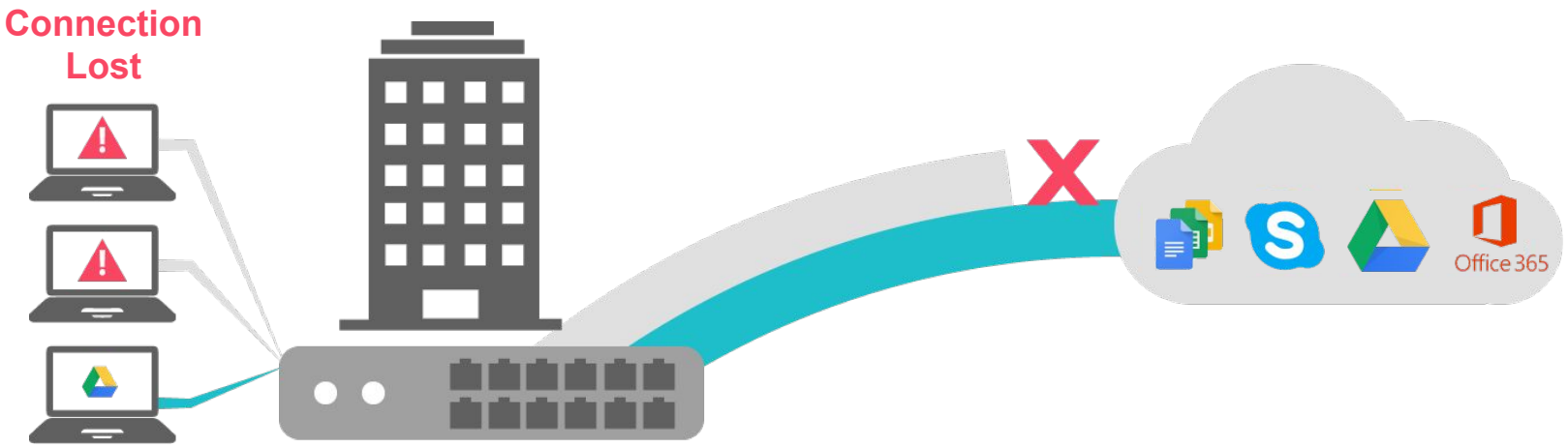
If you connection goes down, your office stops working.

Unbreakable Connectivity



Even if you connect multiple WAN lines...

Unbreakable Connectivity



...a lost connection will lead to a broken session.

Unbreakable Connectivity

Enter **SpeedFusion SD-WAN**.
Combine multiple connections into a single VPN tunnel.

Unbreakable Connectivity

Even if a line goes down, your office remains unaffected.

Affordable Connectivity

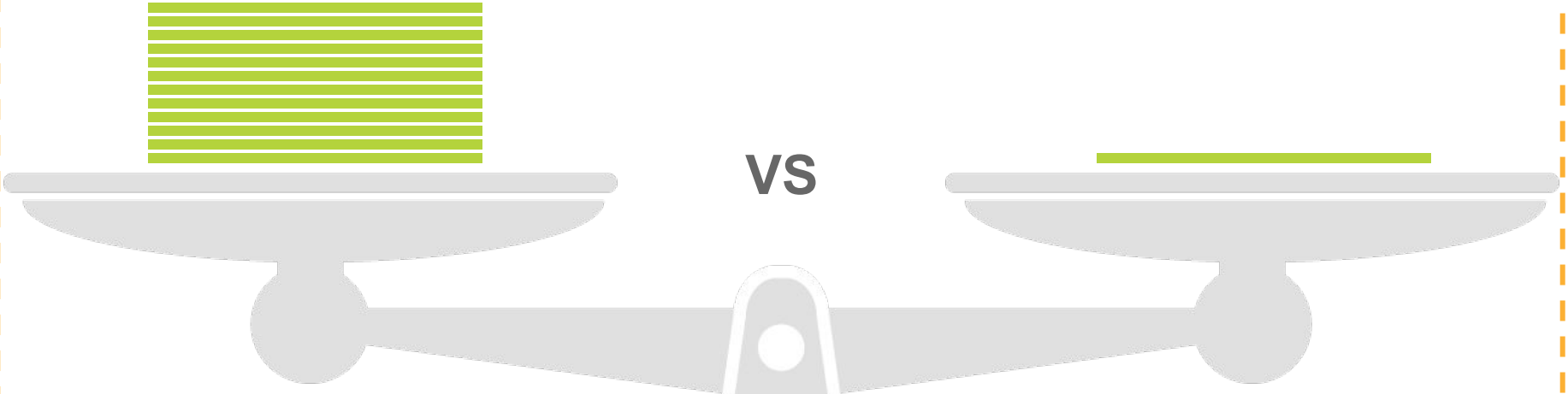
250Mbps: $1460 / Month

For 99.999% reliability, many organizations go for costly leased lines.

Affordable Connectivity

250Mbps Private Line:
$1460 / Month

3x 100Gbps ADSL:
$120 / Month



With SpeedFusion SD-WAN, you can combine multiple commodity links, saving up to 90% of network costs.

Affordable Connectivity

peplink

Private Line: 99.999%

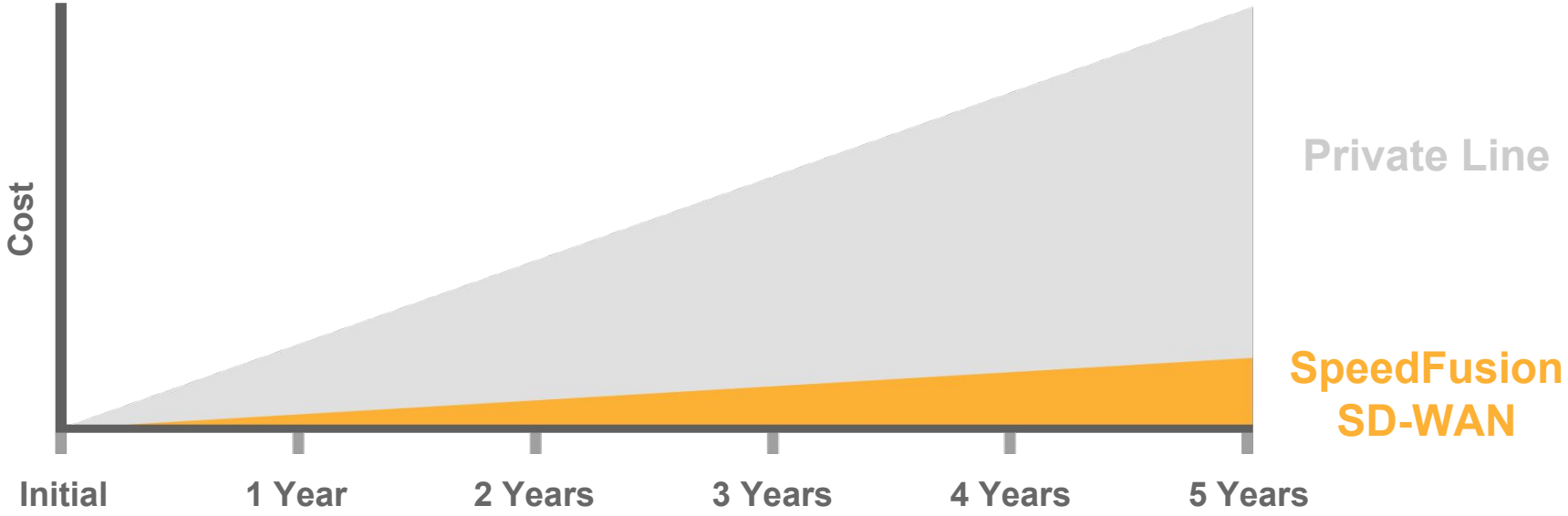
vs

DSL: 98%
DSL: 98%
DSL: 98%

→ **99.999%**

99.999% reliability is achieved through bandwidth bonding.

Affordable Connectivity



Over time, those cost savings can add up!

Sample Clients

peplink

WSI
Integrated Logistics | Supply Chain Solutions

50%
Saved

Town of Tonawanda

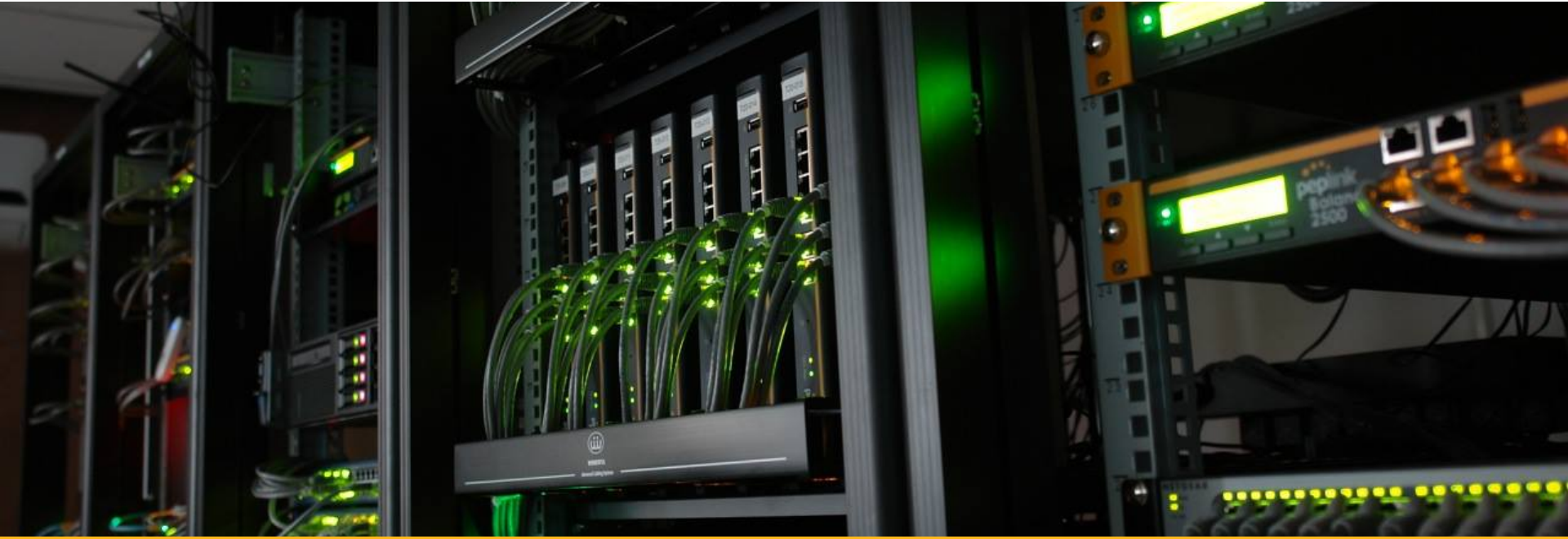
92%
Saved

CLINTON NATIONAL BANK

85%
Saved

Adding to Life
pluss

67%
Saved

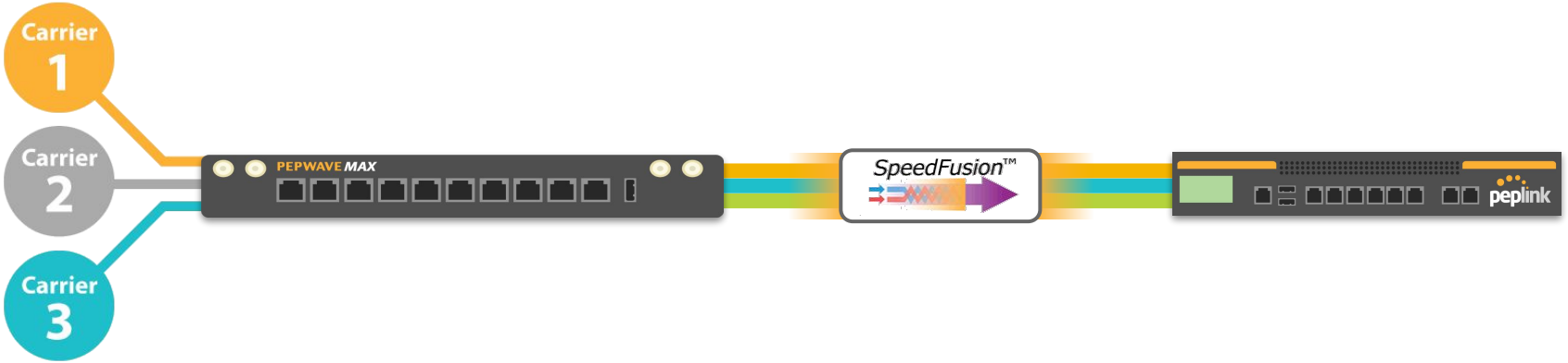


Peplink Training - Tech

Tech Concepts: SpeedFusion

Peplink's SD-WAN: SpeedFusion

Overview



- Patented technology, creating a **single VPN** **across all WANs.**
- Bandwidth from multiple WANs are bonded at the **packet level**.
  - **256-bit AES** encrypted traffic utilizes all healthy WANs.
  - Aggregated speed, even for a **single user or session**.
  - **Sessions persist**, even when individual WAN links lose connection.

Peplink's SD-WAN: SpeedFusion

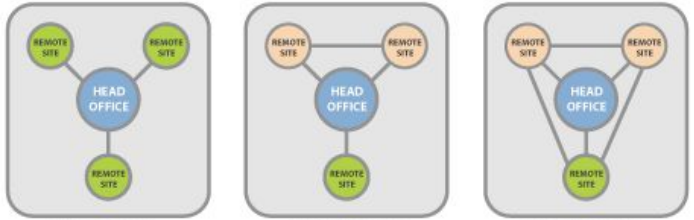
Overview

- **Peplink to Peplink VPN**

- **2x SpeedFusion capable units (min)**
  - Different models of Peplink/Pepwave devices can create different levels of PepVPN/SpeedFusion

- **Public IP on at least 1x WAN connection**
  - If the WAN is not a Static Public IP, register it with a supported **DDNS** service and we can create **SpeedFusion** to the WAN DDNS host name

- **Multiple Configuration Types**



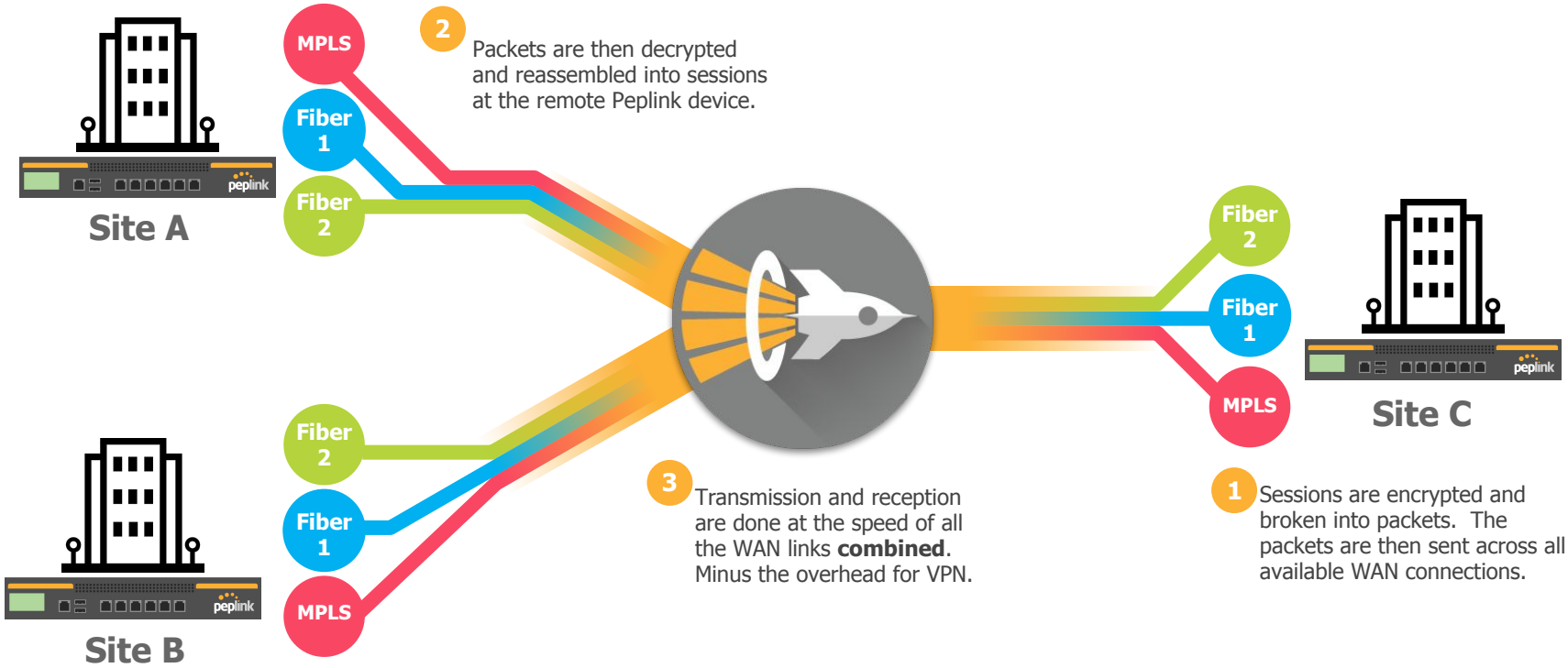
Point to Point **Star** **Full Mesh**
(Point to Multi-Point)

- **Multiple Deployment/Setup Methods**

Peplink UI **Zero-Touch**

SpeedFusion

How it works



Peplink's SD-WAN: SpeedFusion

Core Technologies

Bandwidth Bonding

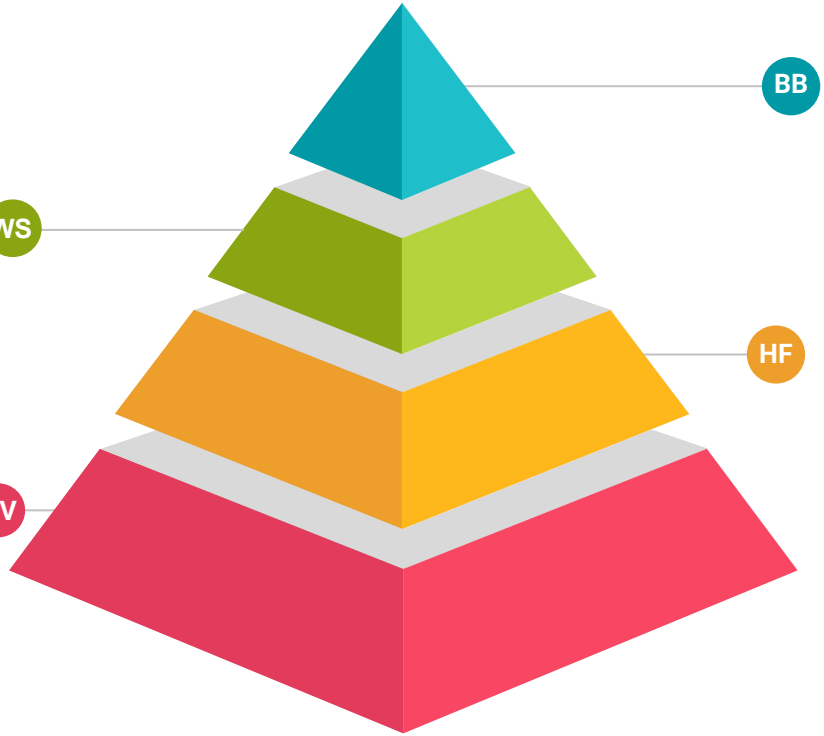
BB

Combine the speed and bandwidth of multiple WAN connections.

WAN Smoothing

WS

Use multiple WAN connections to create a single, jitter-free data stream.



Hot Failover

HF

Switch from one WAN connection to another while keeping your sessions intact.

PepVPN

PV

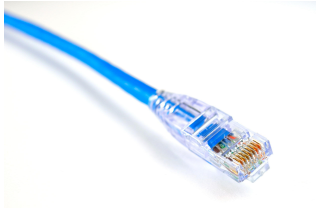
Offers the benefits of IPsec, plus a variety of performance and reliability features.

SpeedFusion: Hot Failover

Enables you to change connections while keeping your session intact.

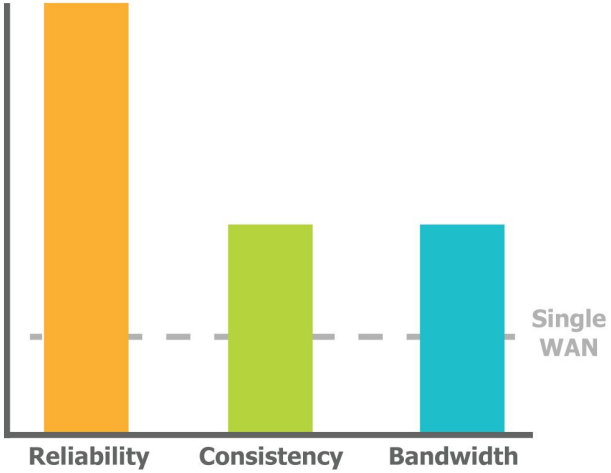
Verticals and applications that benefit from Hot Failover:

Small Offices



Long-Distance Ethernet

Retail Connectivity

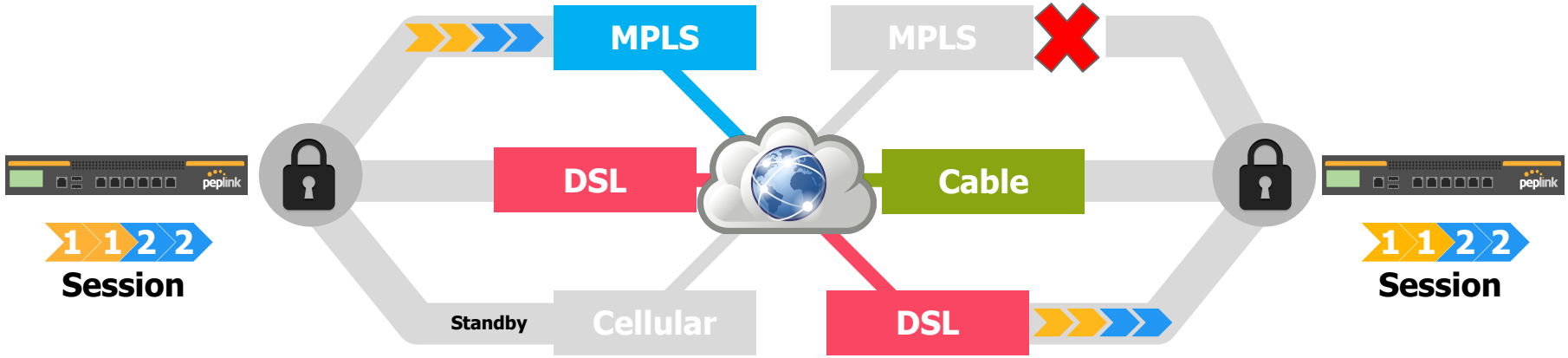


Useful for deployments where you need reliability while keeping costs down.

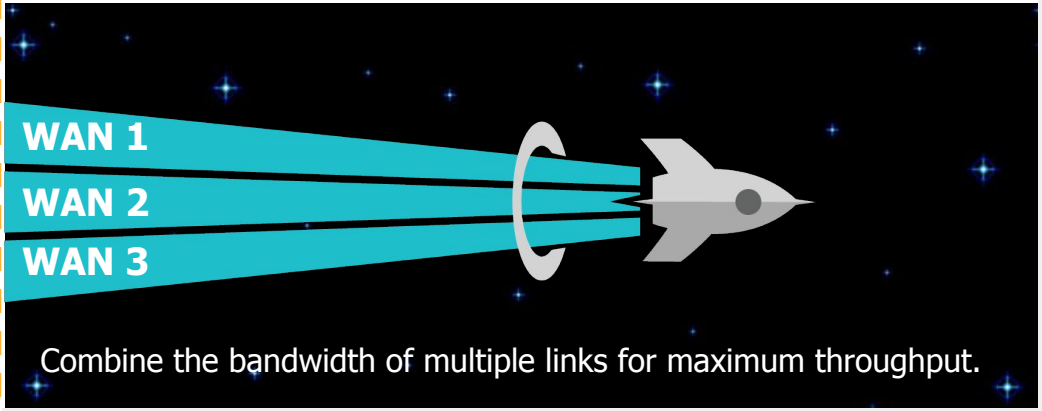
SpeedFusion: Hot Failover

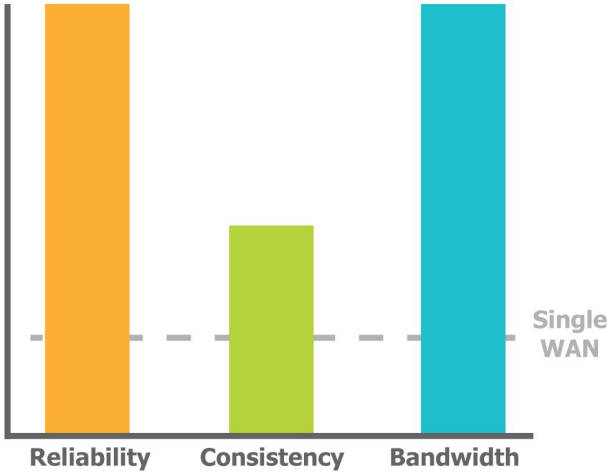
How it works

- Establishes a tunnel on **all active links**
- Only **sends user traffic on one active link at a time**
- If a link fails, the traffic is quickly routed through the second tunnel (*sub-second*)
- Applications can operate uninterrupted during handoff (*Hot Failover*)



SpeedFusion: Bandwidth Bonding





Useful for deployments where you need as much speed as you can get.

Verticals and applications that benefit from Bandwidth Bonding:

MPLS Alternative

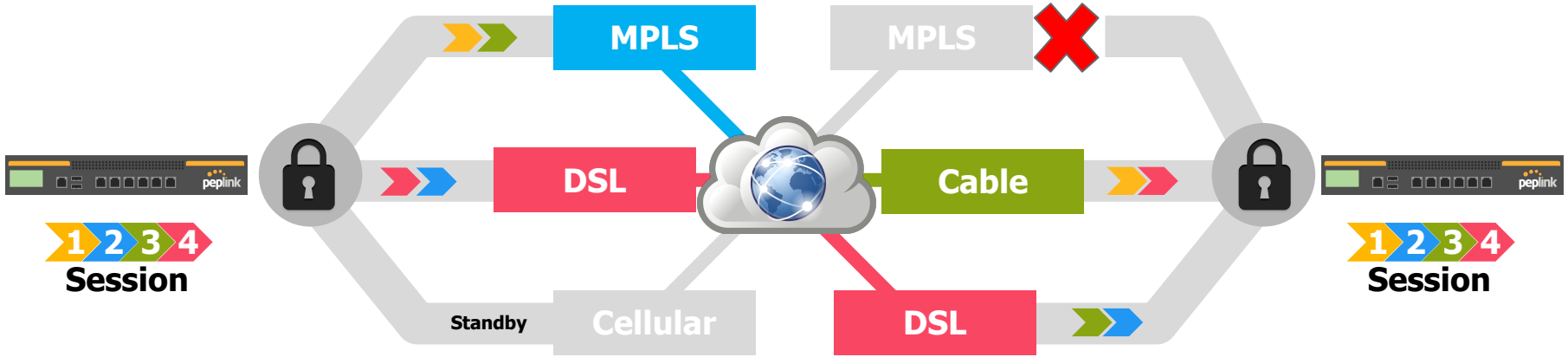
Remote Surveillance

In-Vehicle Connectivity

SpeedFusion: Bandwidth Bonding

How it works

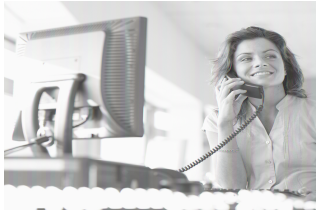
- Establishes a tunnel on **all active links**
- **Splits application traffic** across all active connections
- **Increased throughput** is possible, certain link combinations are not realistic
- If a link fails, the traffic is quickly routed through the second tunnel (*sub-second*)
- Applications can operate uninterrupted during handoff (*Hot Failover*)



SpeedFusion: WAN Smoothing

WAN Smoothing uses bandwidth to cover rough spots in connectivity.

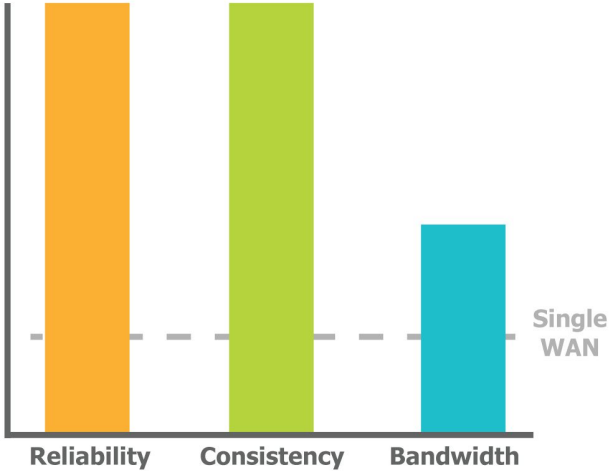
Verticals and applications that benefit from WAN Smoothing:



VoIP

Videoconferencing

TV and Radio Broadcasts

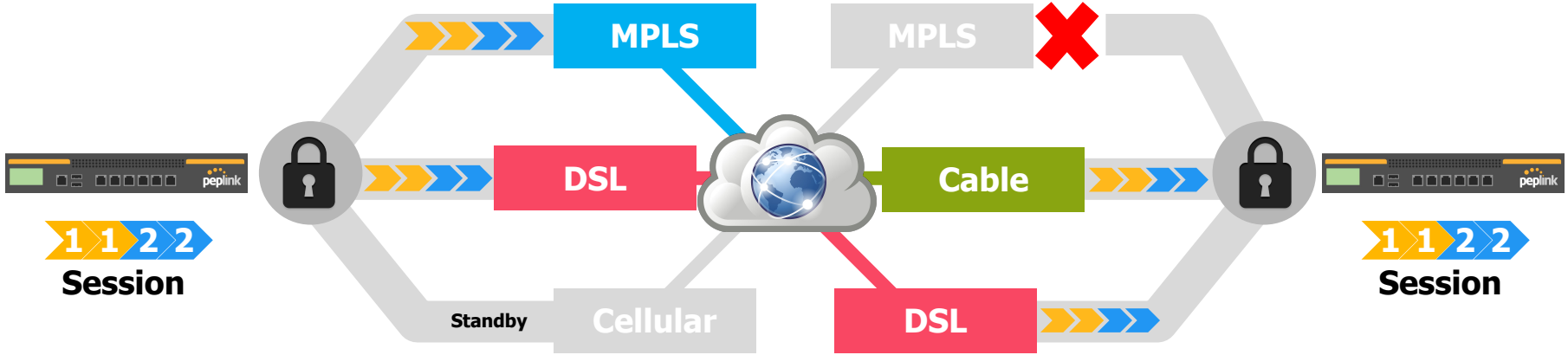


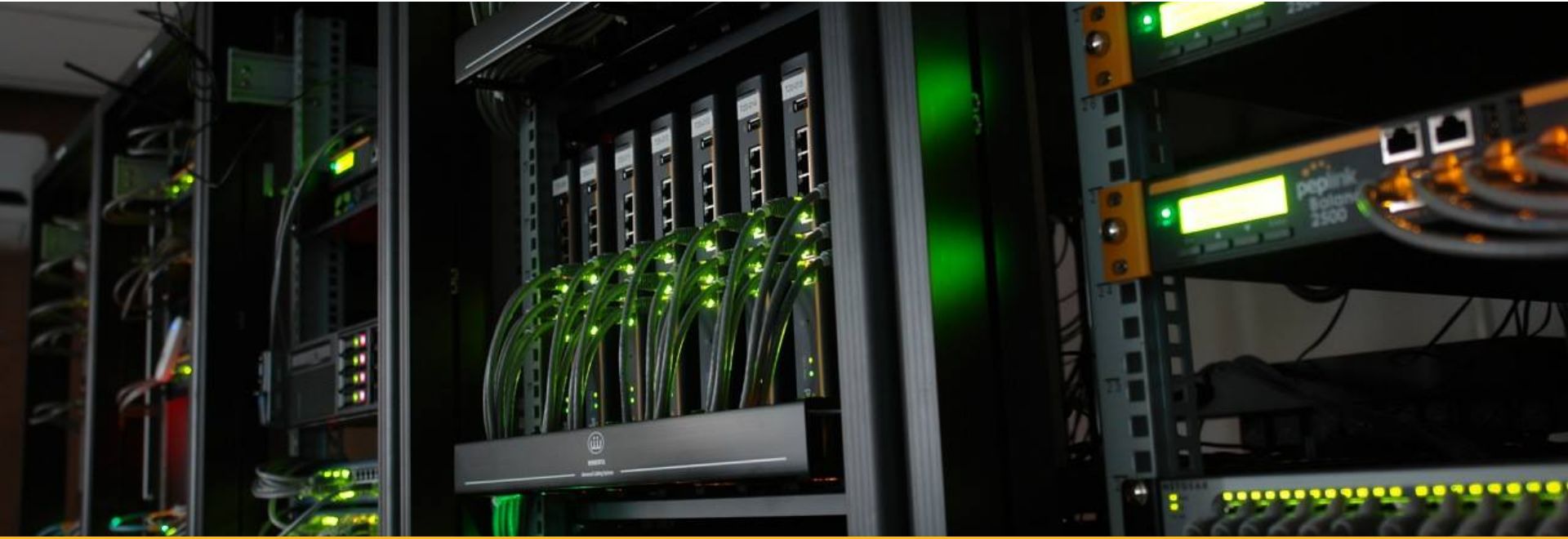
Useful for deployments where improving consistency is more important than improving bandwidth.

SpeedFusion: WAN Smoothing

How it works

- Establishes a tunnel on **all active links**
- Sends redundant copies of traffic to each active connection
- The copy that **arrives first is used**
- If a link fails, the redundant copy is automatically used – ZERO interruption or delay
- Smoothing optimizes traffic for more stable latency (jitter), less packet loss



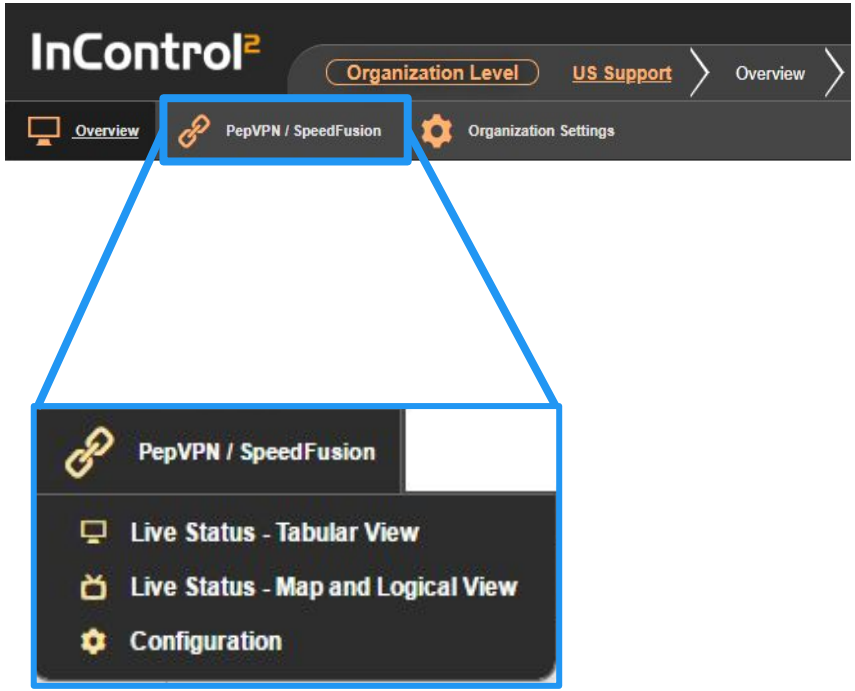


PCE Boot Camp 2018

Tech Concepts: SpeedFusion configuration options

SpeedFusion Configuration

InControl 2 - Zero Touch Configuration



Create and **Monitor** **SpeedFusion** VPNs

- Create **SpeedFusion** between **multiple Groups, multiple Orgs** or a ***non IC2 managed Peplink*!**
- Supports all **SpeedFusion** deployments
  - **Full Mesh**
  - **Hub-and-Spoke**
  - **Point-to-Point**
- Supports all Advanced **SpeedFusion** Features

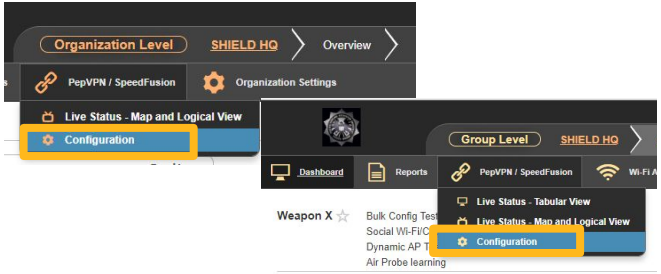
SpeedFusion Configuration

InControl 2

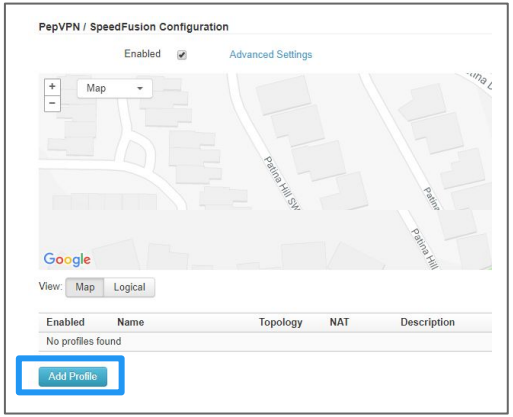
Organization or **Group** Level:

1. **PepVPN/SpeedFusion**
   a. Configuration
2. **Add Profile**

1)

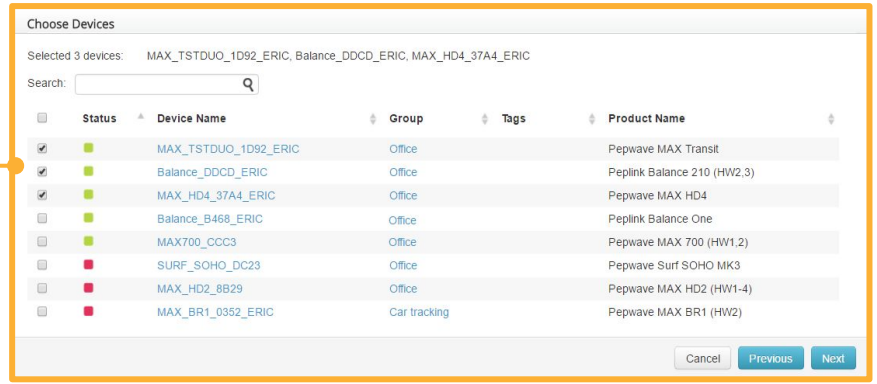


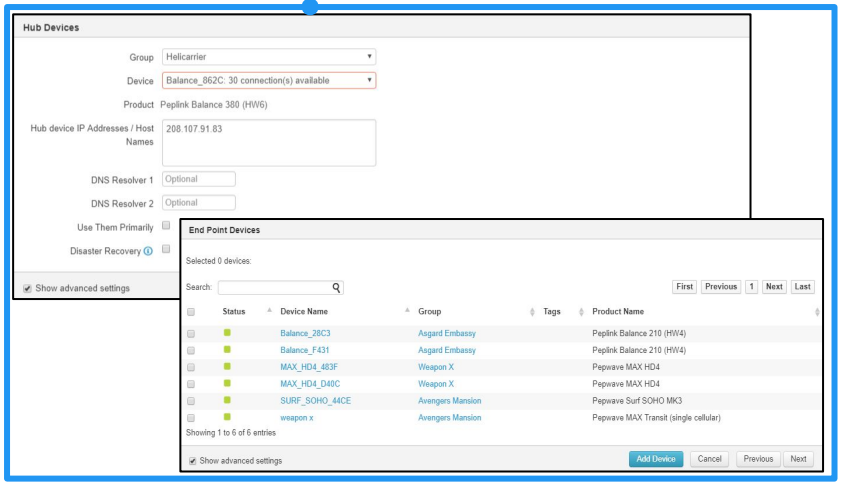
2)

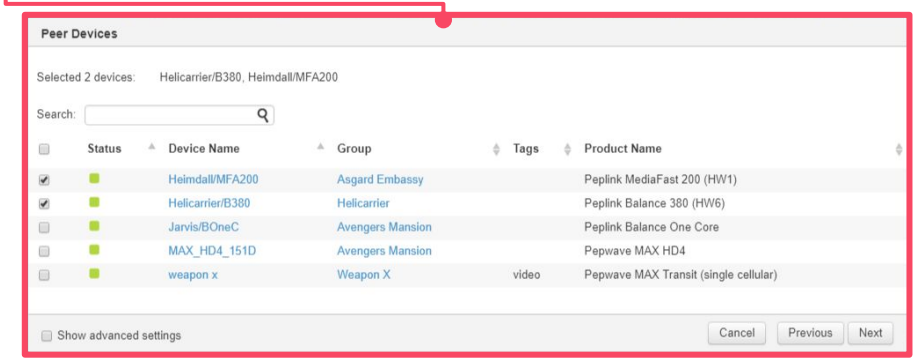


SpeedFusion Configuration

InControl 2



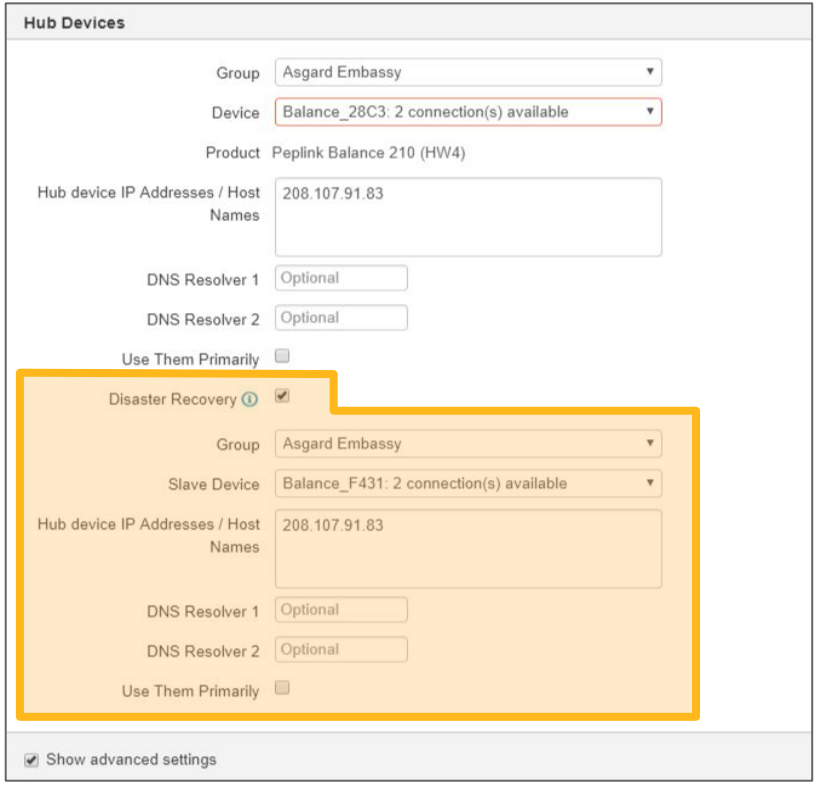




SpeedFusion Configuration

New Feature: **InControl 2 - Disaster Recovery**

- Creates a *second, lower-priority* set of **PepVPN** tunnels between each **endpoint** and the **secondary hub**.
  - Each endpoint will be required to use two PepVPN licenses
  - Allows for routing around bad connections to ensure up-time



InControl 2: SpeedFusion Configuration

Profile options

Profile Options

Profile Name

Encryption: 256-bit AES / Off

Data Port: Default / Custom

Link Failure Detection Time: Recommended (Approx. 15 secs) / Fast (Approx. 6 secs) / Faster (Approx. 2 secs) / Extreme (Approx. 1 sec)

Shorter detection time incurs more health checks and higher bandwidth overhead

WAN Smoothing: Off - Disable WAN Smoothing / Normal - The total bandwidth consumption will be at most 2x of the original data traffic. / Medium - The total bandwidth consumption will be at most 3x of the original data traffic. / High - The total bandwidth consumption depends on the number of connected active tunnels.

Path Cost: 10

OSPF will determine the best route through the network using the assigned cost.

Link Settings: Advanced Link Settings

WAN Settings: Advanced WAN Settings

Note

Show advanced settings | Cancel | Previous | Next

Advanced Link Settings

Search: | First | Previous | 1 | Next | Last

Device A (Hub)	Link A to B Name	A to B Port	A to B Cost		Device B (Endpoint)	Link B to A Name	B to A Port	B to A Cost
Balance_28C3	conn_to_MAX_HD4_D40C	default	10	⟷	MAX_HD4_D40C	conn_to_Balance_28C3	default	10
Balance_28C3	conn_to_MAX_HD4_483F	default	10	⟷	MAX_HD4_483F	conn_to_Balance_28C3	default	10
Balance_F431	conn_to_MAX_HD4_D40C	default	110	⟷	MAX_HD4_D40C	conn_to_Balance_F431	default	110
Balance_F431	conn_to_MAX_HD4_483F	default	110	⟷	MAX_HD4_483F	conn_to_Balance_F431	default	110

Showing 1 to 4 of 4 entries

Generate new PSK's | Reset Defaults | Cancel | Save

Advanced WAN Settings

Search: | First | Previous | 1 | Next | Last

Device	SpeedFusion	Remote Device	WAN Connection Priority
Heimdall/MFA200	No	Helicarrier/B380	WAN 1:1↑↓ WAN 2:2↑↓ Mobile Internet:3↑↓
Heimdall/MFA200	No	weapon x	WAN 1:1↑↓ WAN 2:2↑↓ Mobile Internet:3↑↓
Helicarrier/B380	Yes	Heimdall/MFA200	WAN 1:1↑↓ WAN 2:1↑↓ WAN 3:1↑↓ Mobile Internet:1↑↓
Helicarrier/B380	Yes	Jarvis/BOneC	WAN 1:1↑↓ WAN 2:1↑↓ WAN 3:1↑↓ Mobile Internet:1↑↓
Jarvis/BOneC	No		
Jarvis/BOneC	No		
MAX_HD4_151D	Yes		
MAX_HD4_151D	Yes		
weapon x	No		
weapon x	No		

Showing 1 to 10 of 10 entries

Advanced WAN Settings

Link from MAX_HD4_483F to Balance_28C3

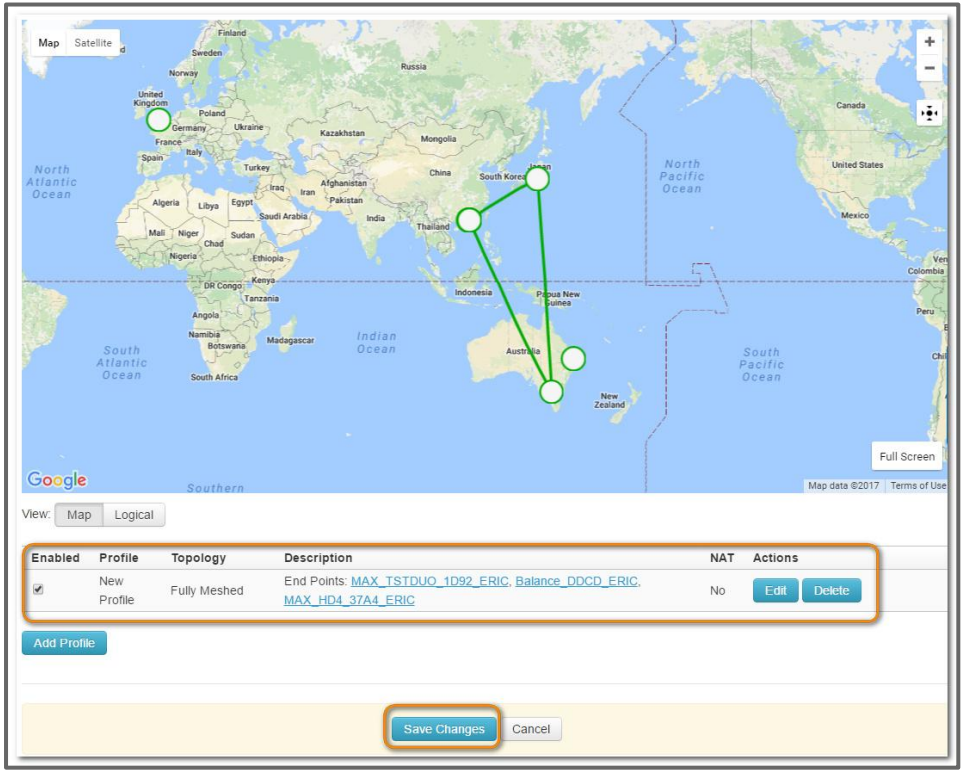
WAN	Priority	Direction	Remote WAN	Cut-off Latency (ms)	Suspension Time after Packet Loss (ms)
WAN 1	1	Up/Down	All		
WAN 2	1	Up/Down	All		
Cellular 1	1	Up/Down	All		
Cellular 2	1	Up/Down	All		
Cellular 3	1	Up/Down	All		
Cellular 4	1	Up/Down	All		
USB	1	Up/Down	All		
Wi-Fi WAN	1	Up/Down	All		
LAN 1 as WAN	1	Up/Down	All		
LAN 2 as WAN	1	Up/Down	All		
LAN 3 as WAN	1	Up/Down	All		

Show advanced settings | Reset Defaults | Cancel | Save

InControl 2: PepVPN/SpeedFusion

Complete Profile and Save

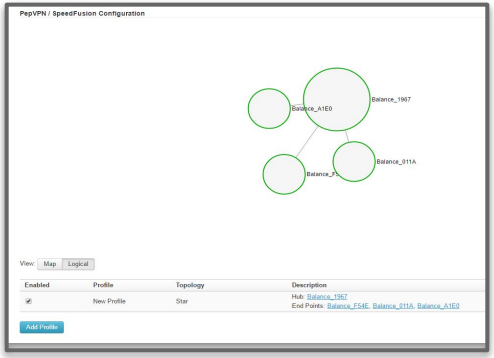
Save Changes to apply the **SpeedFusion** Profile to your **Peplink** devices.



InControl 2: PepVPN/SpeedFusion

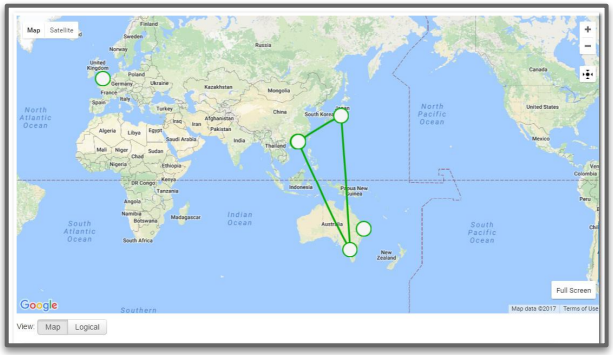
View Status

Logical

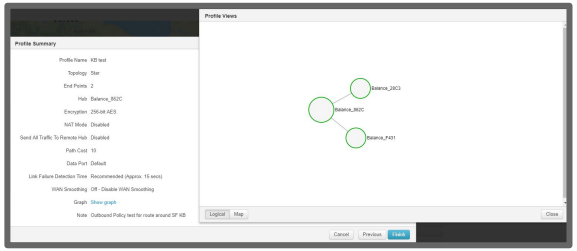


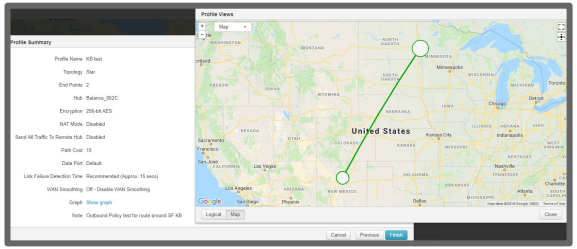
OR

GPS



- **New**: viewable in the **SpeedFusion Profile** screen

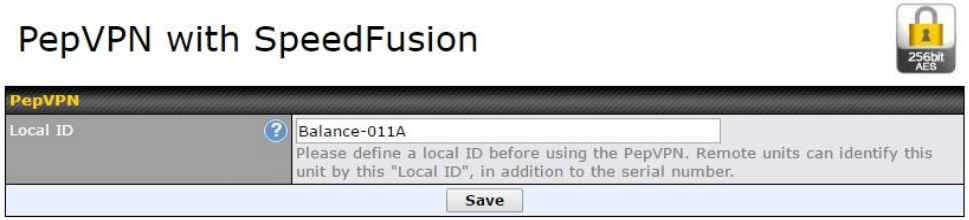


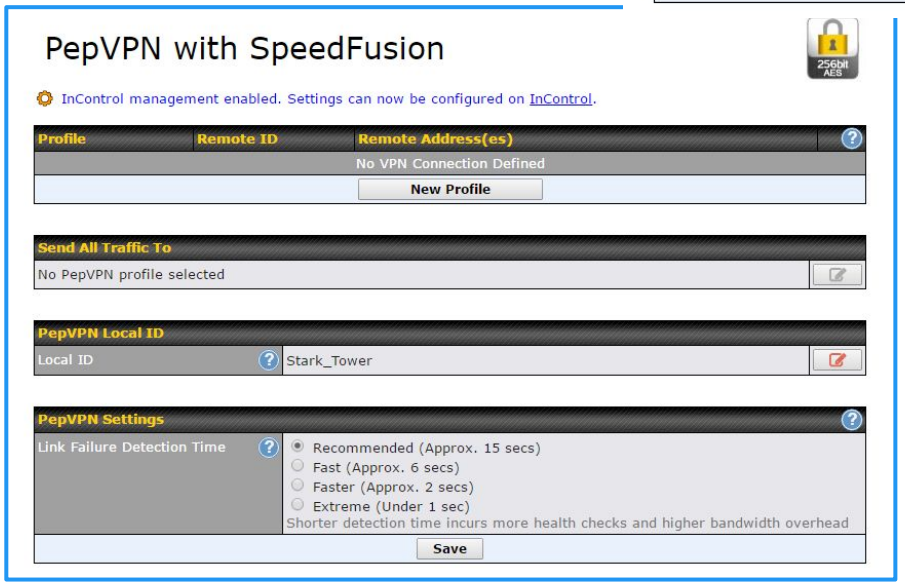


SpeedFusion - UI Configuration

Local UI and initial settings

1) Assign **Local ID** for unit and **Save/Apply Changes** -

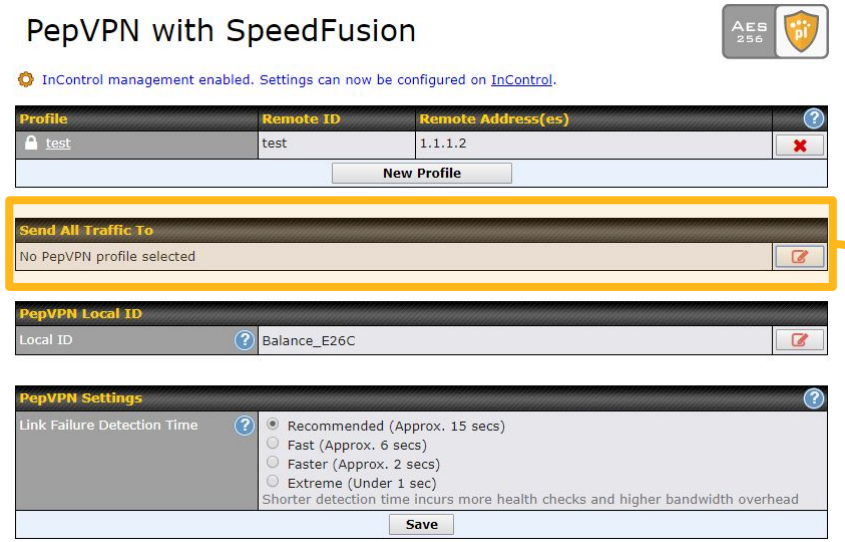


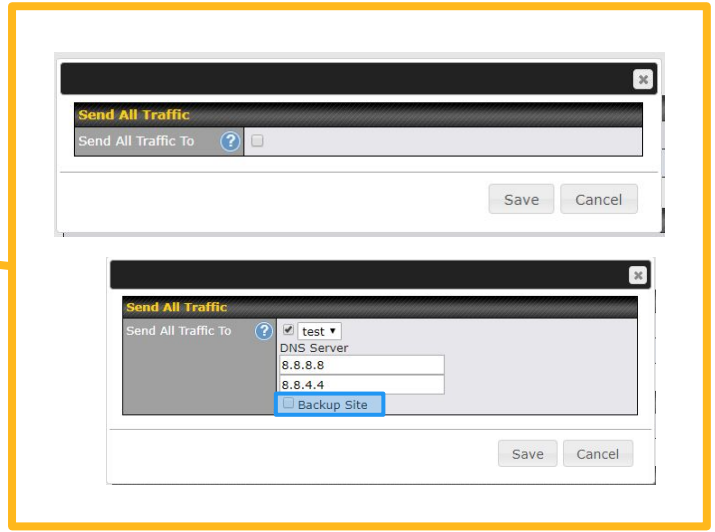


2) Choose **New Profile** -

SpeedFusion: UI Configuration

Local UI and initial settings

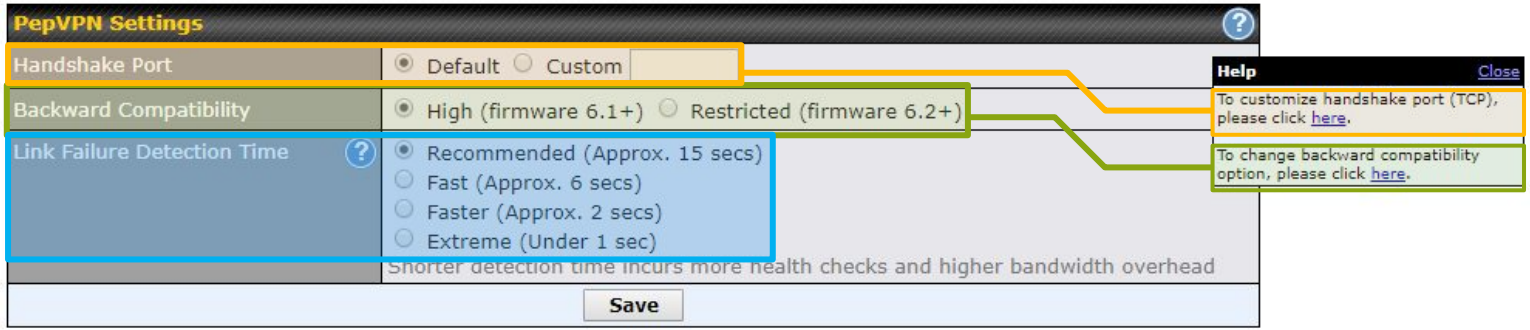




- This feature allows you to redirect all traffic to a specified **PepVPN** connection.
  - **Backup Site**: Designate a **backup SpeedFusion** profile that takes over should the main **PepVPN** connection fail.

SpeedFusion - UI Configuration

Local UI and initial settings



Link Failure Detection Time **PepVPN** can detect routing failures on the path between two sites over each WAN connection. **Failed WAN connections aren't used**.

- Health check packets are sent to the remote unit to detect any failure. The more frequent checks it sends, the shorter detection time, but the higher bandwidth overhead will be consumed.

Handshake Port (hidden under right Help icon): Changes the initial Port that **SpeedFusion** begins on.

- **Default**: TCP 32015

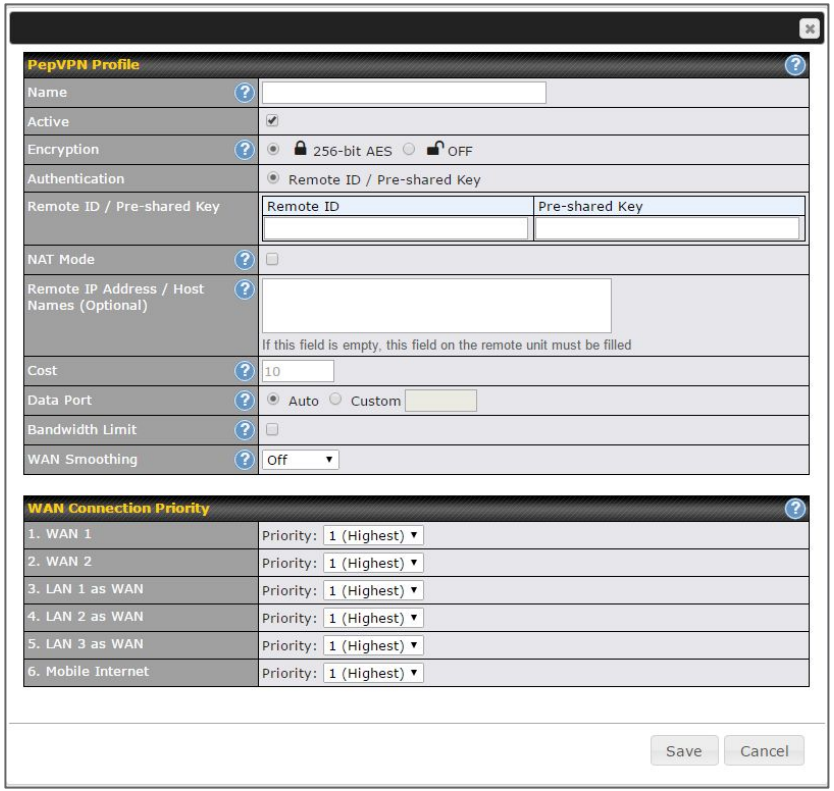
Backward Compatibility (hidden under right Help icon): Restrict the firmware version for PepVPN connections to comply with the PCI DSS requirement.

SpeedFusion: UI Configuration

Local UI and initial settings

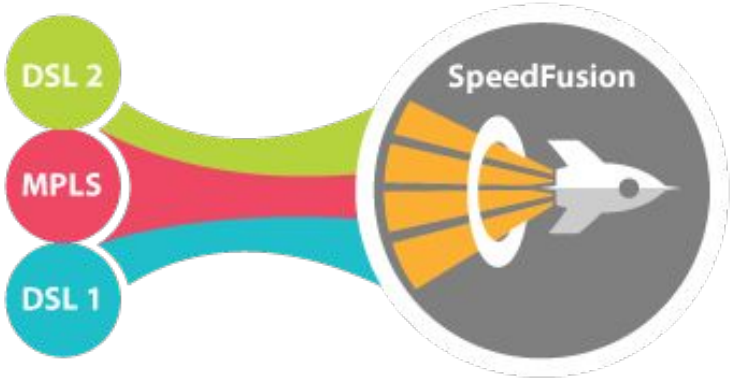
Configure each **SpeedFusion** peer -

- Name the **Profile** - This identifies the VPN
- Enter the **Remote ID** of the remote **Peplink Balance** unit.
    - The **Remote ID** is the **Local ID** of the other Peer unit
- Enter the **WAN IP/DDNS Host Name** of the Remote peer.
- **Save** and **Apply Changes**



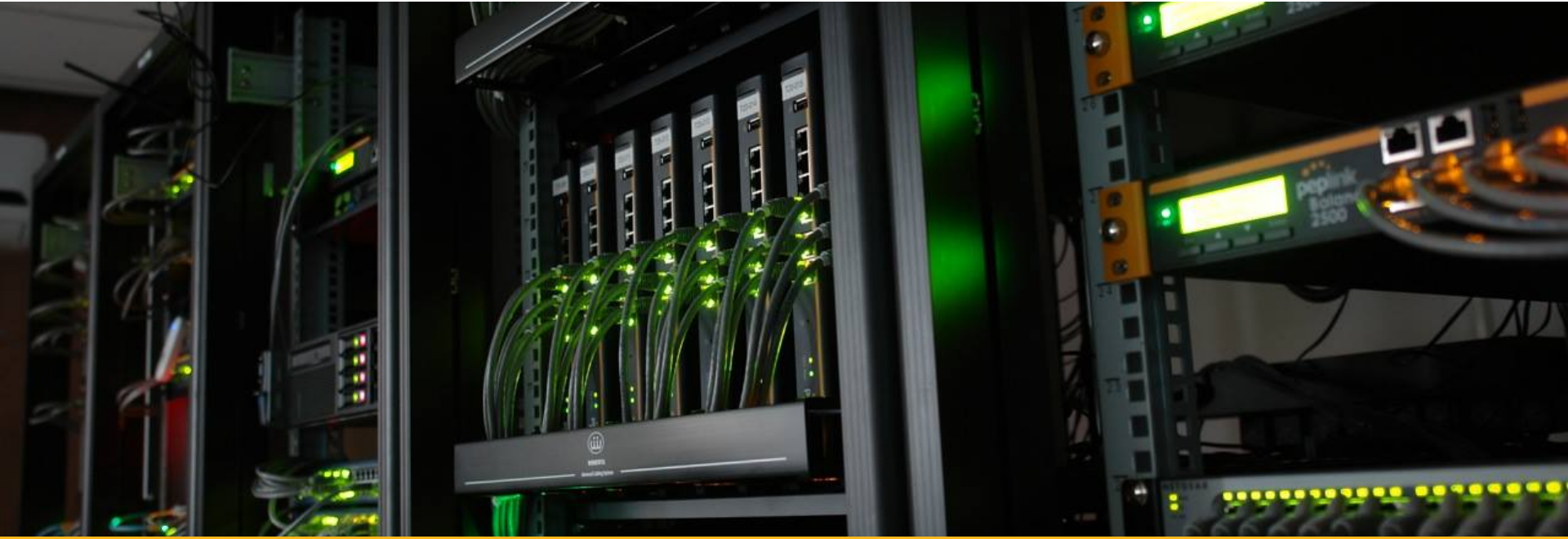
Note - In **WAN Connection Priority**, if you select all **WAN** connections as the same priority, the **SpeedFusion** VPN traffic will be bonded across all connections equally.

SpeedFusion: Recommendations



- **Use WAN connections from different ISPs**
  - Mixing carriers eliminates possible bottlenecks, failures and helps ensure uptime
- **Use WAN with similar bandwidth profiles**
  - Latency Difference <150 ms
  - Latency <800ms for each WAN link
    - Using connections of similar speed and latencies helps ensure optimal performance.

peplink



PCE Boot Camp 2018

Tech Concepts: SpeedFusion - SD-WAN

What is Software-Defined WAN?

SD-WAN Overview

- A revolutionary way to simplify branch office networking and assure optimal application performance by using centrally controlled and managed WAN virtualization.
- Unlike traditional WANs, SD-WAN delivers increased network agility and cost reduction, abstracting the network hardware from the applications that use the network.

SD-WAN Operating Requirements (Gartner, 2015)

1) SD-WAN solutions provide a lightweight replacement for traditional WAN routers, and are agnostic to WAN transport technologies (that is, they support MPLS, Internet, Long Term Evolution [LTE], etc.).

2) Based on business and/or application policies, SD-WAN solutions allow for load sharing of traffic across multiple WAN connections in an efficient and dynamic fashion.

3) SD-WAN solutions dramatically simplify the complexity associated with management, configuration and orchestration of WANs.

4) SD-WAN solutions must provide secure VPNs, and have the ability to integrate additional network services and offload Internet-destined traffic closer to the edge of the network.

-Munch, Slaymaker, Lerner, Rickard. "Market Guide for Software-Defined WAN", Gartner, Dec 2015

Why adopt SD-WAN Terminology?

SD-WAN overview

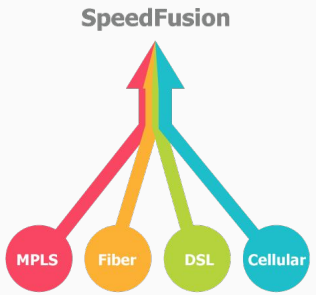
- By Gartner's definition, Peplink has been providing SD-WAN solutions for almost a decade!
- SD-WAN is the first standard industry-wide term that neatly describes our technology and product capabilities.
- Using this term can simplify product descriptions to end users.
- This term is useful for avoiding confusion with traditional (server) load balancing products.

Note: SD-WAN does not replace any existing Peplink terms.

How SD-WAN Fits With Peplink?

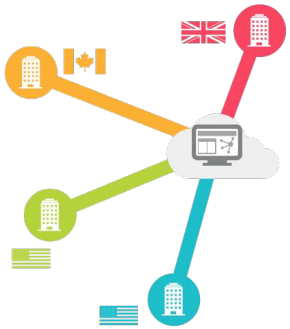
WAN Virtualization

Peplink routers enable you to build one logical WAN connection using multiple technologies (e.g. xDSL, MPLS, cellular, fiber)



Centrally Managed

Using InControl 2, network administrators gain full control over their networks using a single interface.

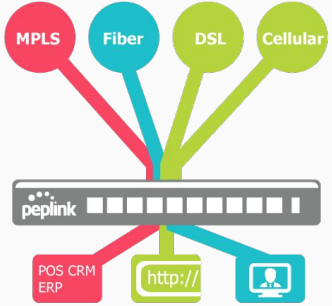


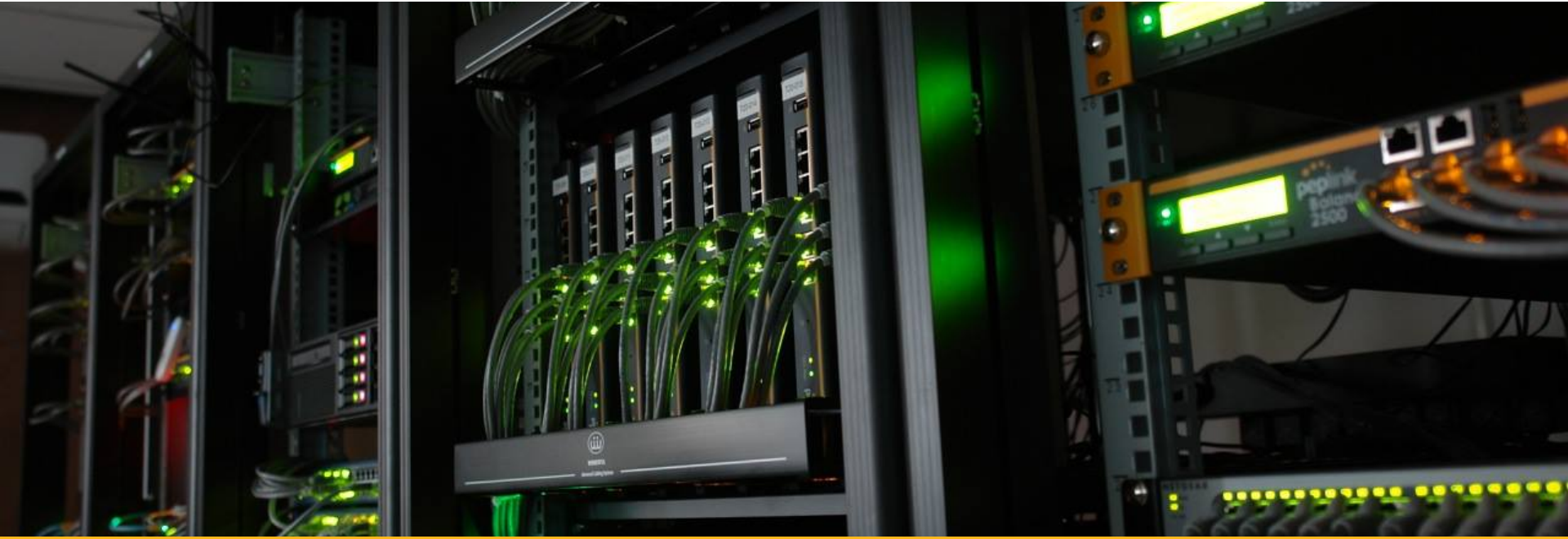
Secure VPN

Using SpeedFusion VPN technology, branch offices gain secure, local network access to cloud resources

Intelligently Managed

Peplink routers actively monitor WAN quality and makes intelligent decisions to direct application traffic flow.





PCE Boot Camp 2018

Tech Concepts: InControl 2

InControl 2

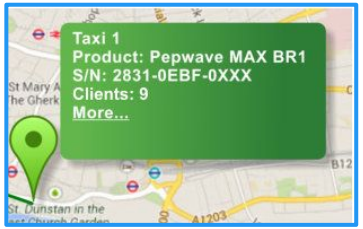
Introduction and Overview

InControl 2 is our **Cloud-based** device management, monitoring, and reporting tool used with **Peplink**/**Pepwave** devices.

With **InControl 2**, you'll get advanced **administration** tools, unprecedented device **visibility**, and comprehensive **reporting** in an easy to manage package.

With both **Public and Private** versions available, as well as a **Smart Device Companion App**, **IC2** is flexible and robust enough to keep eyes on your deployment.

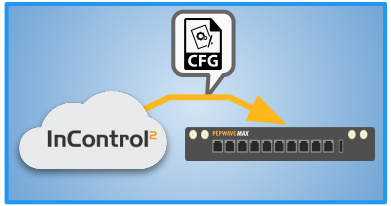
InControl 2: Features



GPS Fleet Tracking

Peplink's MAX Mobile units can report back fleet information to InControl 2 in an easy to review package

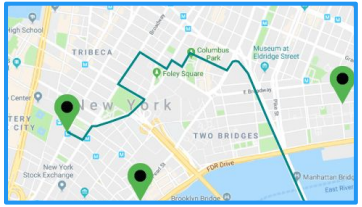
- Embedded Cellular MAX Mobile units compatible
- Customizable to save Data Usage
- Downloadable for use in 3rd party apps
- NMEA or GPX format



Zero Touch Configuration

InControl 2 has a number of cloud based configuration options to make your network setup quick and easy.

- Bulk Configurator
- Template option
- Firewall/Outbound Policy
- Captive Portal
- SpeedFusion



Comprehensive Reporting

InControl 2's suite of Reporting options give you the tools you need to know what's going on in your network.

- Bandwidth usage
- Client Usage
- Real-Time and Historical
- See all Devices in easy to read dashboard

Plus a lot more!

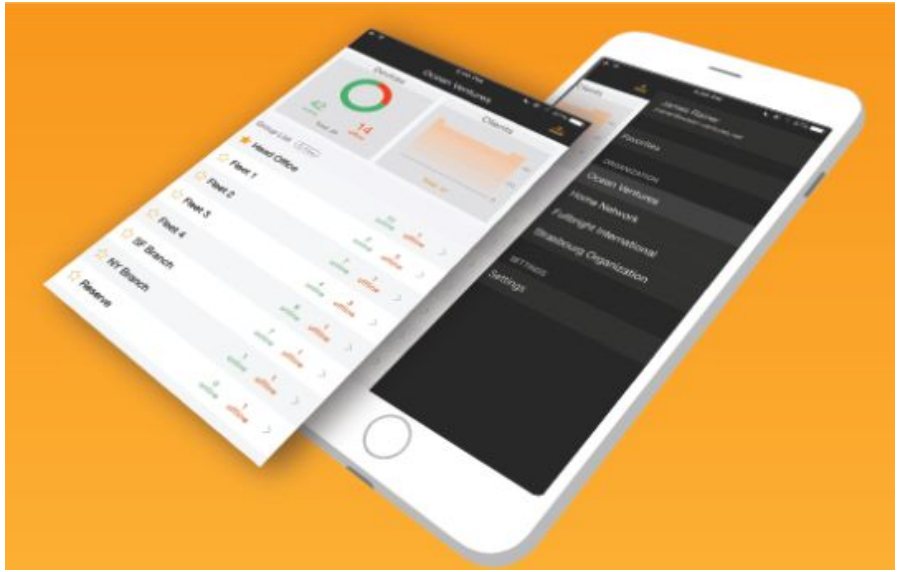
- Firmware **Management**
- Warranty **Monitoring** and renewal
- Configurable and Granular **email alert/notifications**
- Ad Delivery Server
- Get information from Smart Device **Companion App**

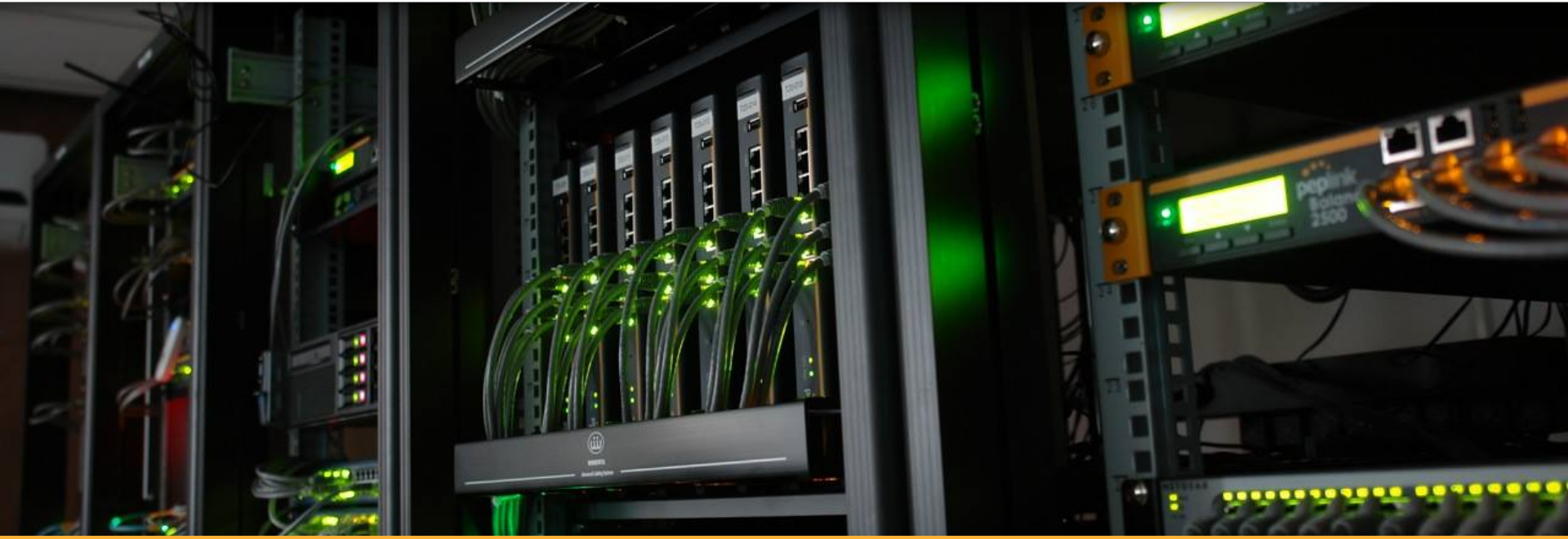
InControl 2

Companion App

Monitor and manage your Peplink/Pepwave network from anywhere with the **InControl mobile app**. Anywhere you go, you can now check the health of your entire network on your mobile device.

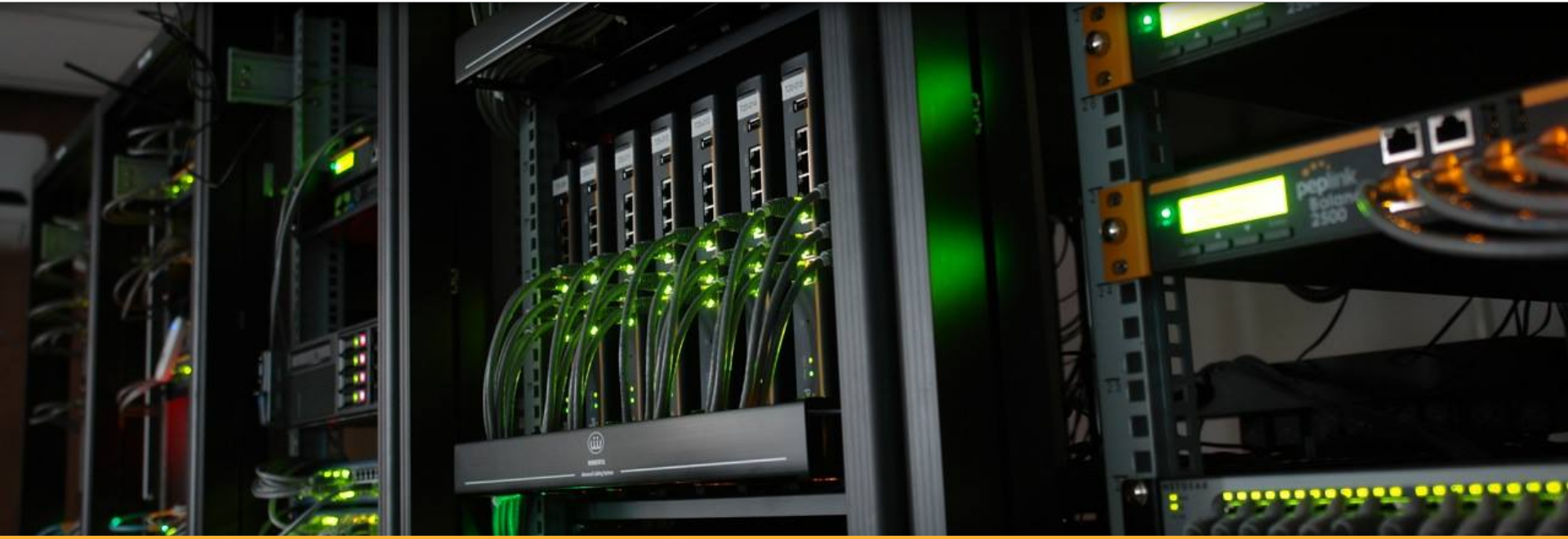
- Save your most commonly accessed groups across all organizations on the **favorite screen**.
- **Check the connection status** of any device, the **clients** they are connected to, and **all activity** affecting the group.
- **Remote Web Admin** to directly access the UI of your Peplink unit
- **iOS ver available** currently, Android ver available soon





InControl 2

Initial Account setup



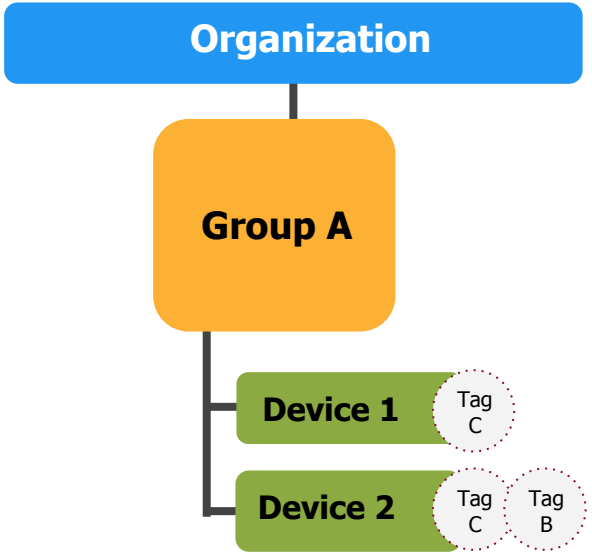
InControl 2 - Overview

Terms

InControl 2 Terms

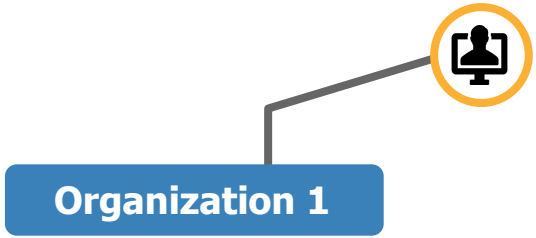
Organizations, Groups and Tags definitions

- An **Organization** always has *at least one* **Group**.
- A **Device** is only ever a member of one **Group** in one **Organization**.
- A **Tag** can be associated with *any number of* **Devices** in a **Group**.
- A **Device** can be associated with *any number of* **Tags.**



InControl 2 Terms

Admin and User definitions and overview

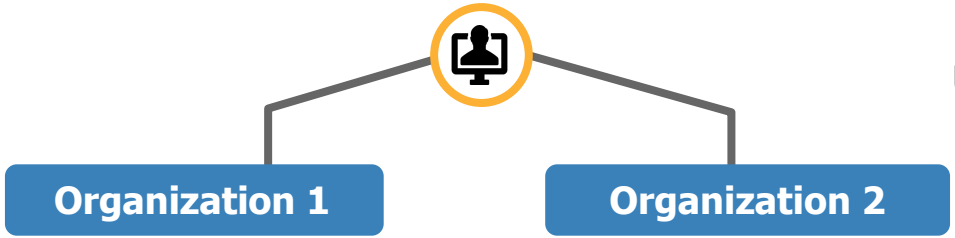


Users

- Always a member of at least **one Organization**

InControl 2 Terms

Admin and User definitions and overview

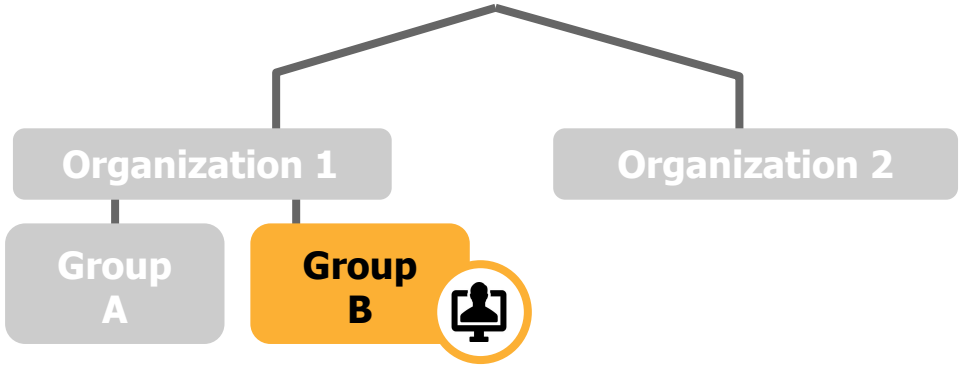


Users

- Always a member of at least **one Organization**
- Can be a member of *any number* of **Organizations**

InControl 2 Terms

Admin and User definitions and overview

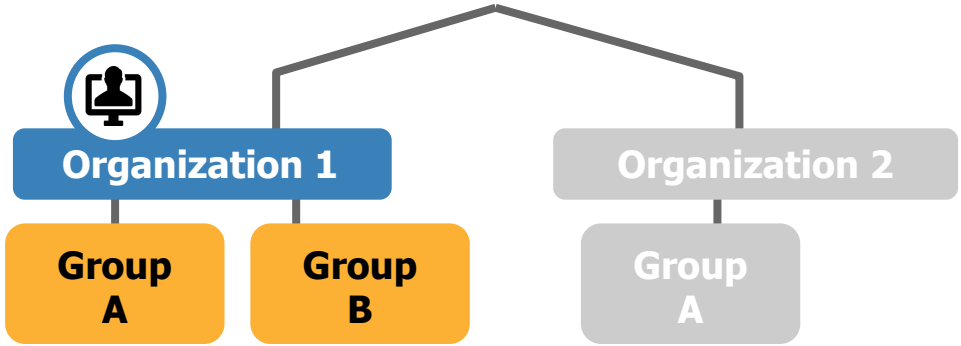


Users

- Always a member of at least **one Organization**
- Can be a member of *any number* of **Organizations**
- Can be *given access* to a **single Group** within an **Organization**

InControl 2 Terms

Admin and User definitions and overview



Users

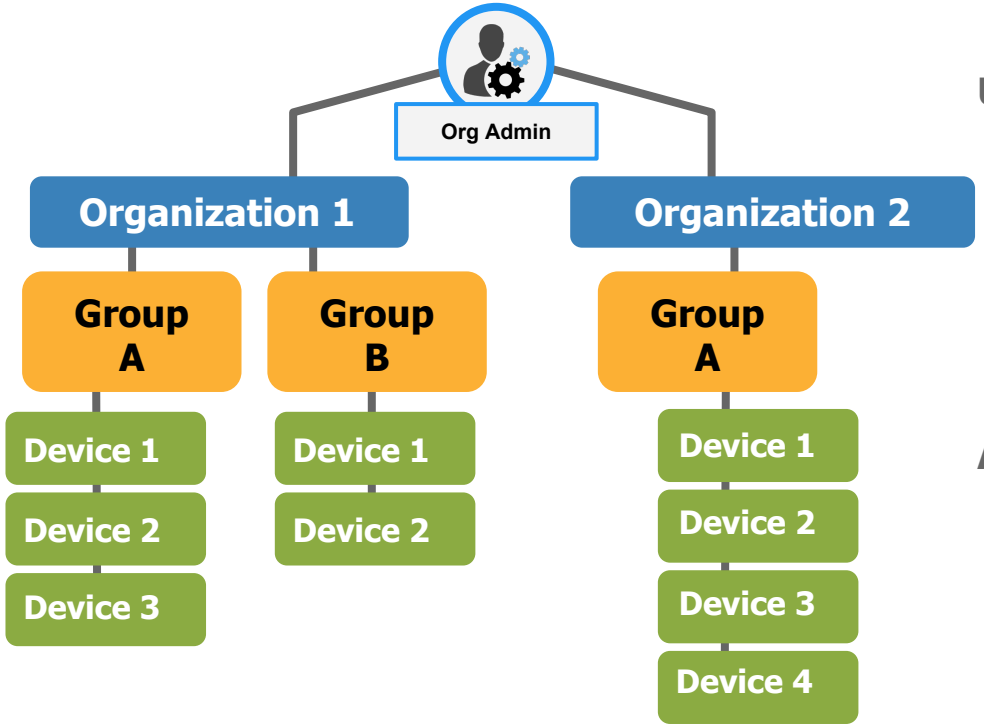
- Always a member of at least **one Organization**
- Can be a member of *any number* of **Organizations**
- Can be *given access* to a **single Group** within an **Organization**

Admins

- An **Organization Admin** has access to all of its **Groups**

InControl 2 Terms

Admin and User definitions and overview



Users

- Always a member of at least **one Organization**
- Can be a member of *any number* of **Organizations**
- Can be *given access* to a **single Group** within an **Organization**

Admins

- An **Organization Admin** has access to all of its **Groups**
- Social Data is *only available* to **Super Org Admins, Captive Portal Admins** and **Portal Viewers**

InControl 2: TAG

Overview

TAG - In **InControl 2**, a **TAG** is a keyword or term assigned to a **Peplink** device.

Once assigned, the **TAG** can be used for a numbe of purposes -

- **Tracking**
- **Configuration**
- **Reporting**
- **Administrative**
- **etc.**

InControl 2

Account Creation

InControl 2: Account Creation

Incontrol2.peplink.com

1) Navigate to - "incontrol2.peplink.com"

2) Select - "New to InControl? **Signup**"

InControl 2: Account Creation

Account information

InControl2 Cloud Based Device Management & Monitoring

1) Fill in basic **Account** information

2) **Submit**

E-mail Address

First Name

Last Name

Password

Confirm password

Language English

Submit

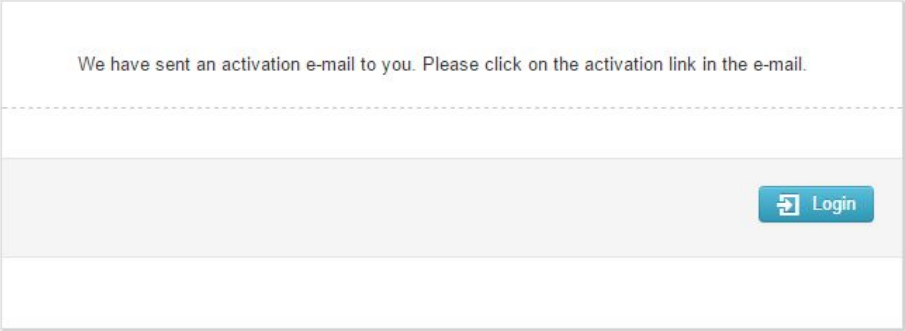
InControl 2: Account Creation

Confirmation

InControl2 Cloud Based Device Management & Monitoring

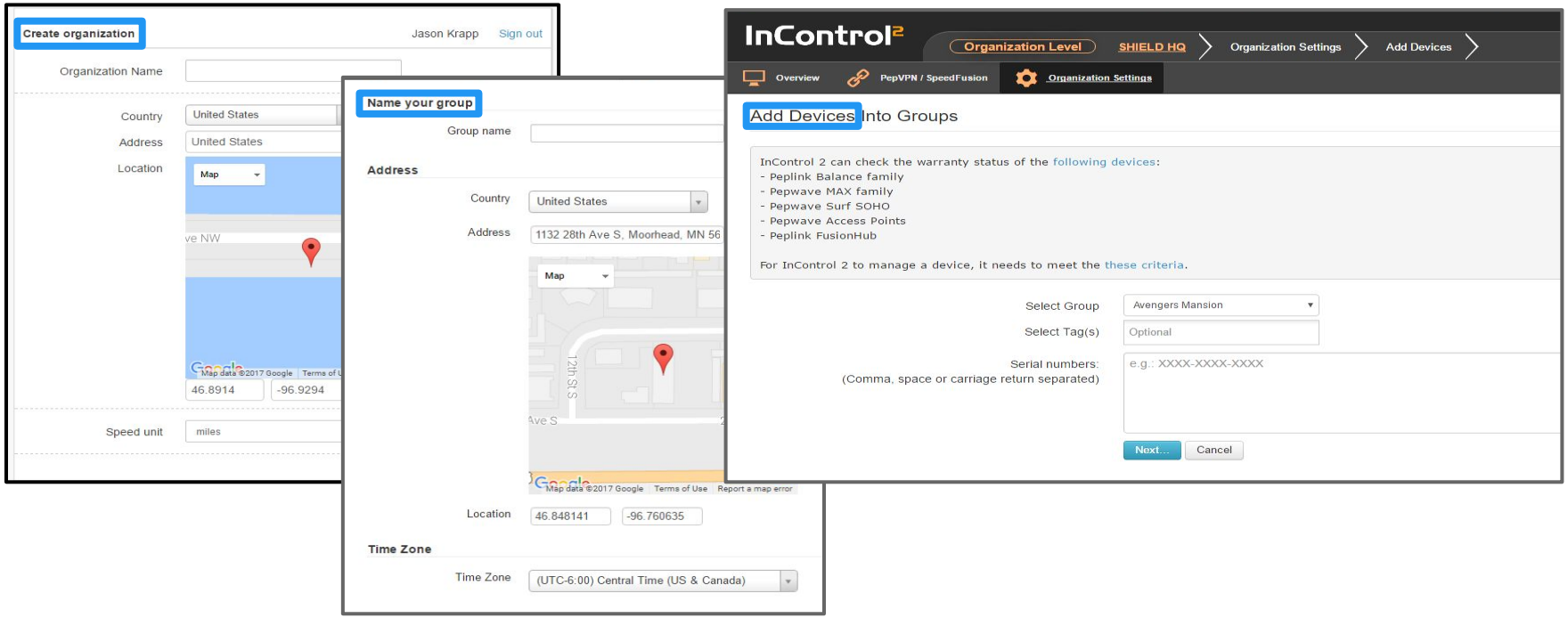
A confirmation email (and activation link) is sent to complete registration.

Then you can move to **Org/Group creation** and **Device** registration.



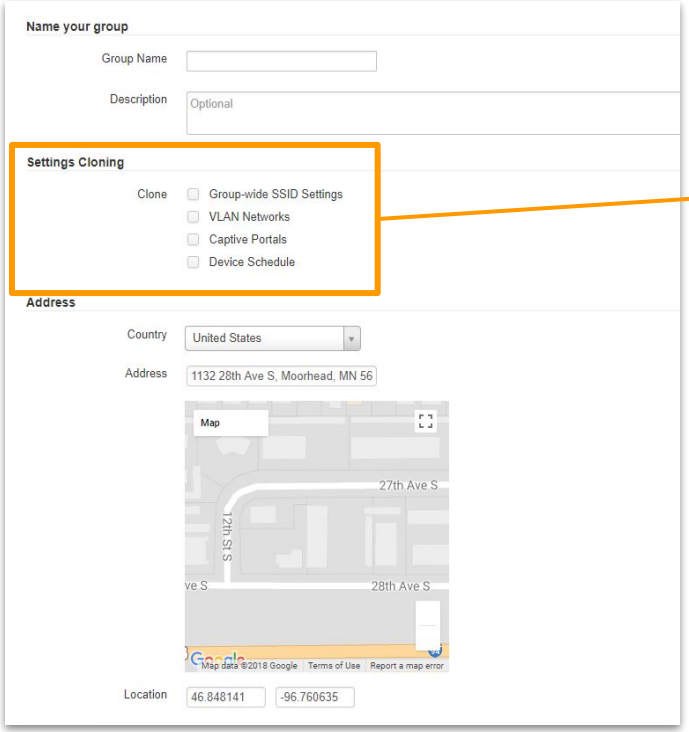
InControl 2: Account Creation

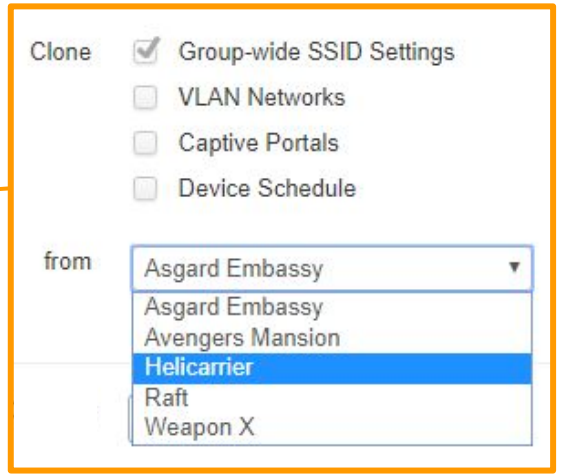
Organization, Group and Device creation/addition



InControl 2: Account Creation

New - Group Level Cloning

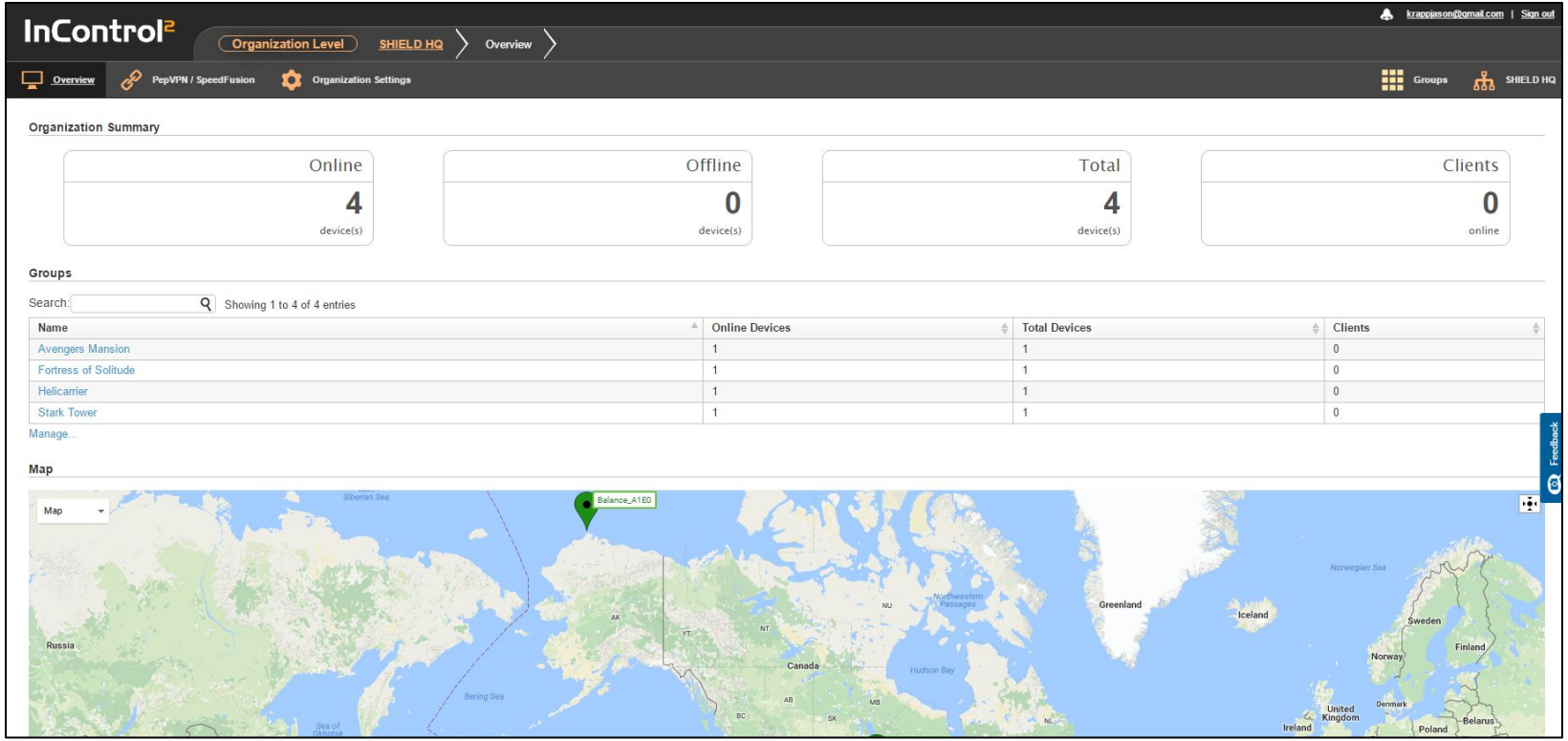


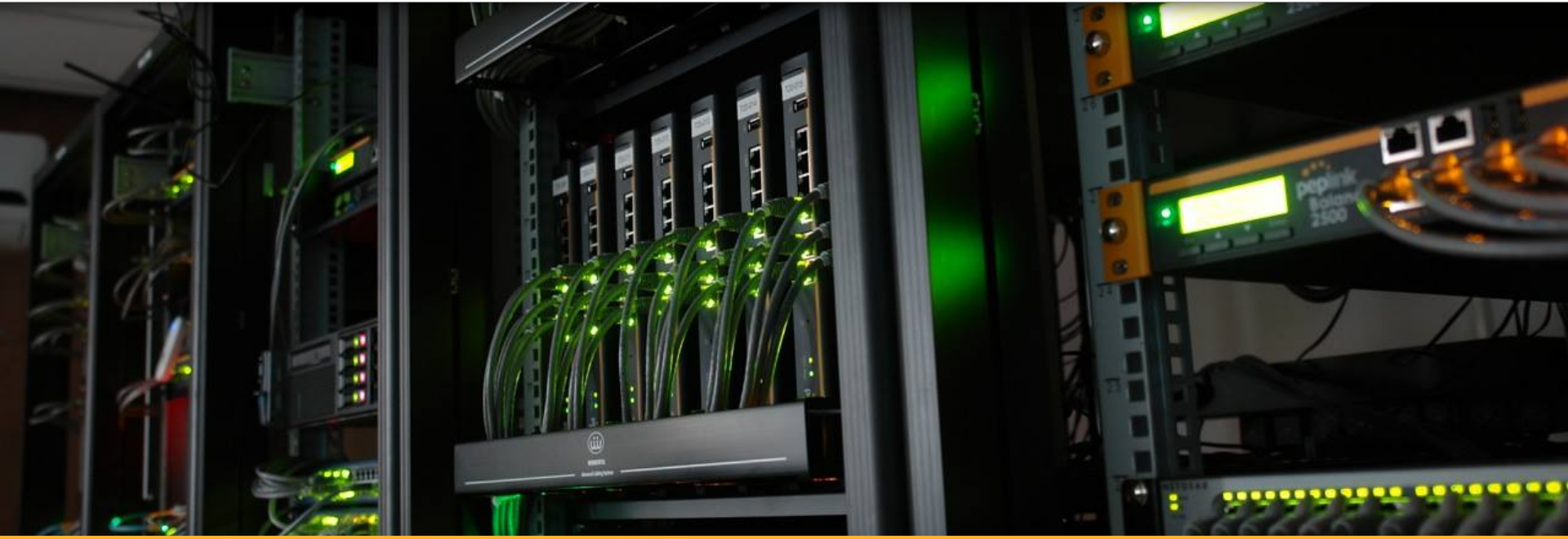


InControl 2 allows you to **clone settings** from an already created **Group** to quickly set-up multiple locations with the same information.

InControl 2: Account Creation

All done!





InControl 2

Zero Touch Configuration options

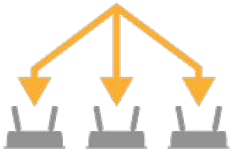
InControl 2: Zero Touch Configuration

Overview

InControl 2 offers a variety of Zero-Touch Configuration options that allows you to remotely configure your Peplink Ecosystem, from basic systems to an in-depth SD-WAN deployment.

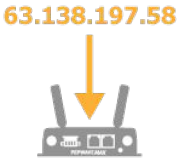
InControl 2: Zero Touch Configuration

Options overview



Bulk Configurator

Master Config File pushed to your Peplink Devices.



Remote Device IP Configuration

Pre-built Config File pushed to your Peplink Devices.

Bulk Outbound Policy Configuration

Extract Traffic Steering rules from a config file to apply to your Peplink Devices.

Bulk Firewall Policy Configuration

Extract firewall policies from a config file to apply to your Peplink Devices.

Centralized Firmware Management

Schedule firmware updates for your Peplink Ecosystem.

Centralized SSID Options

Create and Manage network Wi-Fi options.

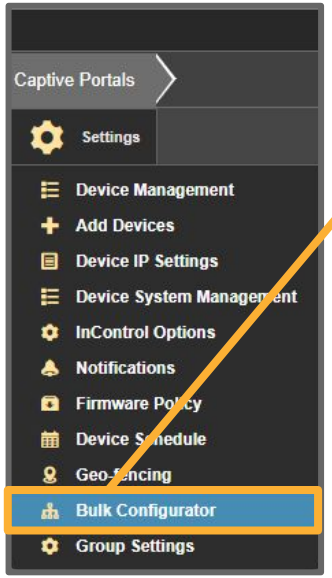
Customized Captive Portal

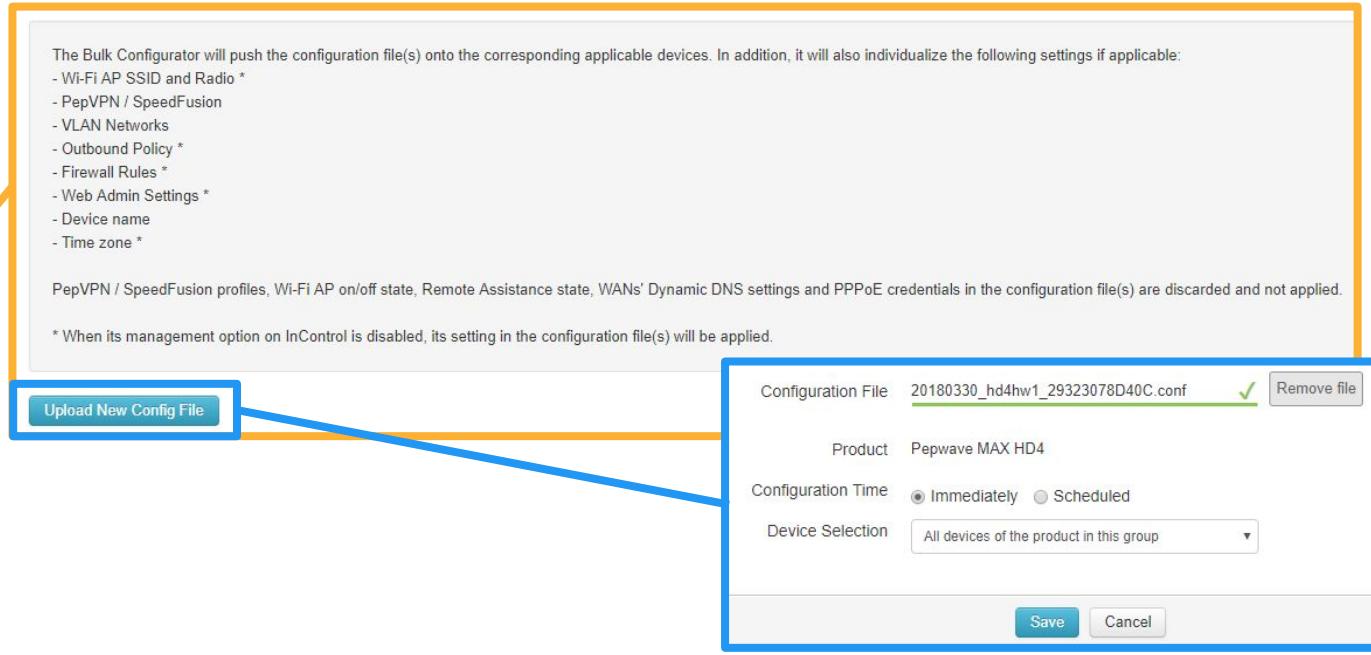
Create and Manage a completely customizable Landing Page.

InControl 2: Zero Touch Configuration

Group Level > Settings > Bulk Configurator

Extract the Configuration File from a pre-configured "Master" **Peplink** Device and upload it to InControl 2. Once uploaded, you can push the config to your Peplink Ecosystem en masse.





InControl 2: Zero Touch Configuration

Group Level > Settings > Device IP Settings

Download a template and build your **Peplink** configuration manually.

Upload the completed configuration template back into **InControl 2** and push it to your **Peplink** Ecosystem en masse.

Peplink Balance / Pepwave MAX Settings | Pepwave AP Settings

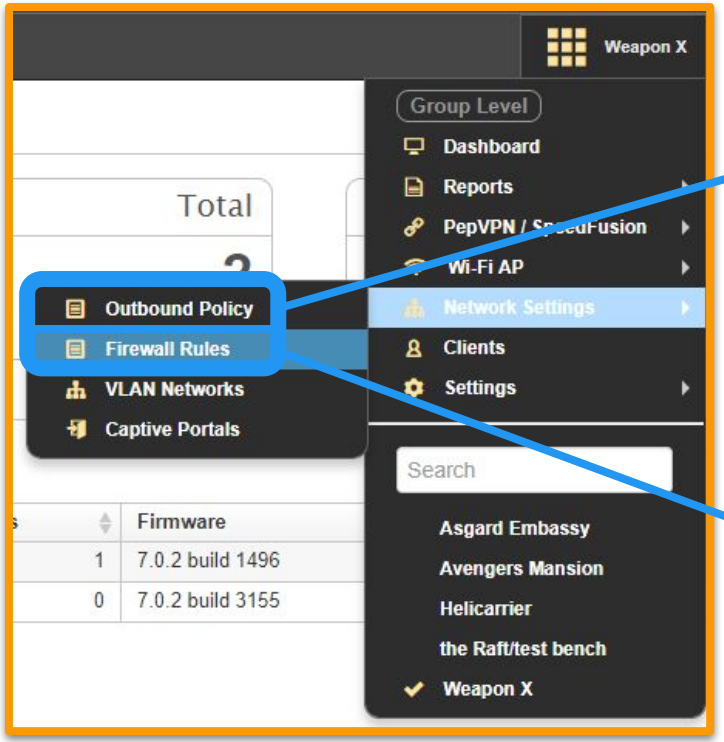
For Peplink Balance/Pepwave MAX devices, settings will be applied to **LAN** interface
Download template for Peplink Balance/Pepwave MAX

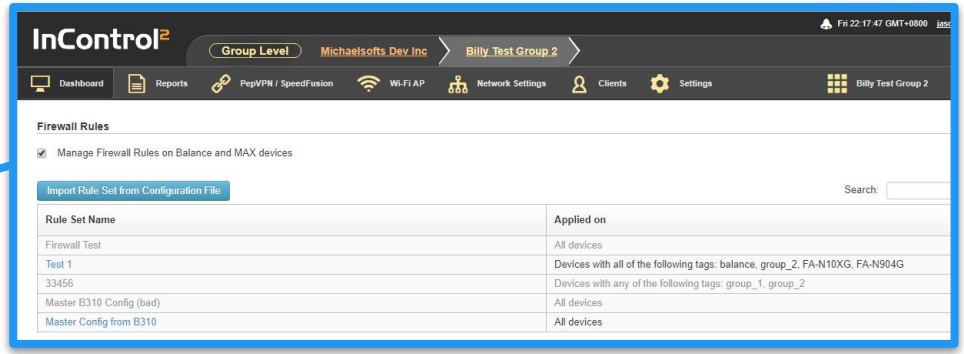
Device Settings

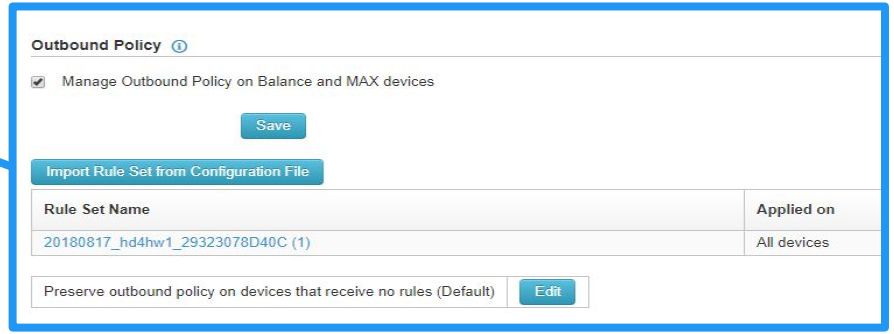
Field Name	Description	Values
SN	Device serial number	1234-5
LAN_NETWORK_LIST	Network in CIDR	192.16
LAN_MEDIA	Physical media setting	auto, 1000ba 100base 100base 10base 10base
LAN_L2_ISO	Layer 2 isolation enabled (Inter-VLAN routing is disabled)	yes, n
LAN_STROUTEn	Static routing entry. Format is (original destination CIDR): (routing IP address)	172.16
DHCP_SERVER	DHCP server setting	enable,
DHCP_SERVER_LEASE	DHCP lease time in seconds	86400
DHCP_SERVER_NETMASK	DHCP server netmask	255.25
DHCP_SERVER_POOL_START	First address in the DHCP address pool (inclusive)	192.16
DHCP_SERVER_POOL_END	Last address in the DHCP address pool (inclusive)	192.16
DHCP_LOG_ENABLE	DHCP logging enabled	yes, n
DHCP_SERVER_DNS	DNS primary and (optional) secondary addresses	192.16
DHCP_SERVER_WINS	WINS primary and (optional) secondary addresses	192.16 default

InControl 2: Zero Touch Configuration

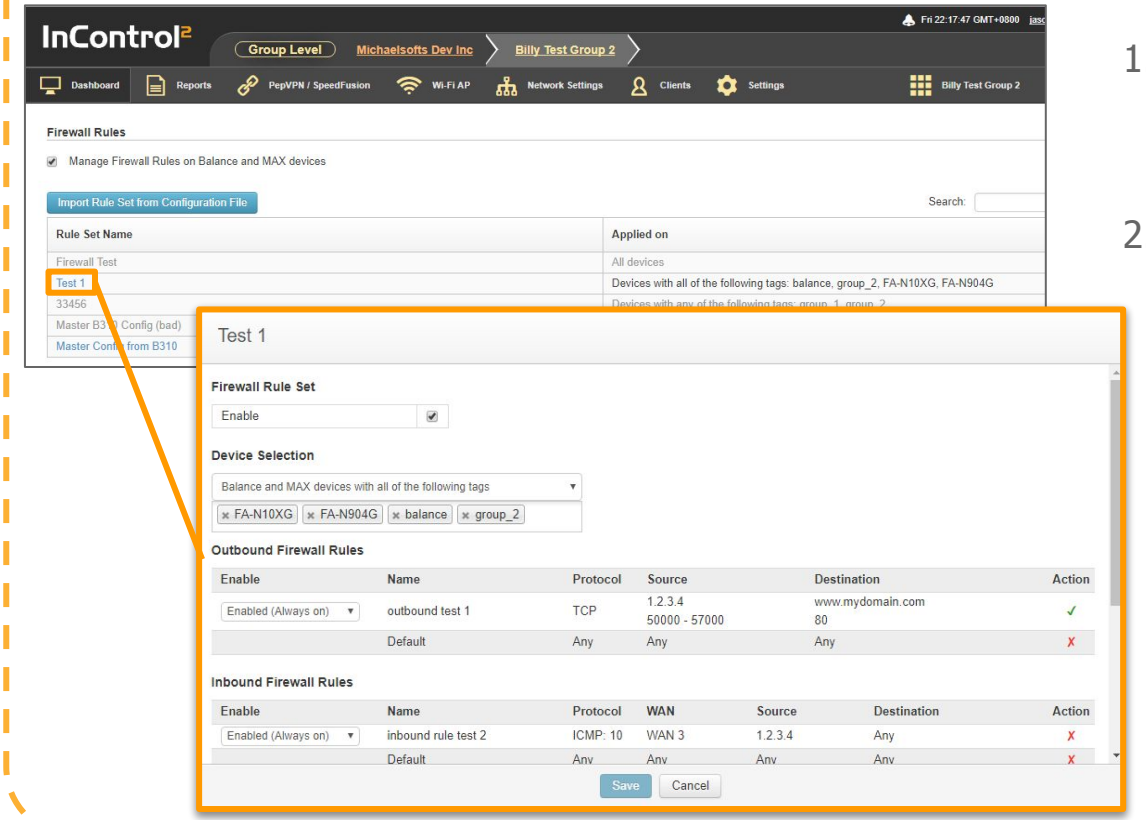
Group Level > Network Settings > Firewall or Outbound Policy Rules





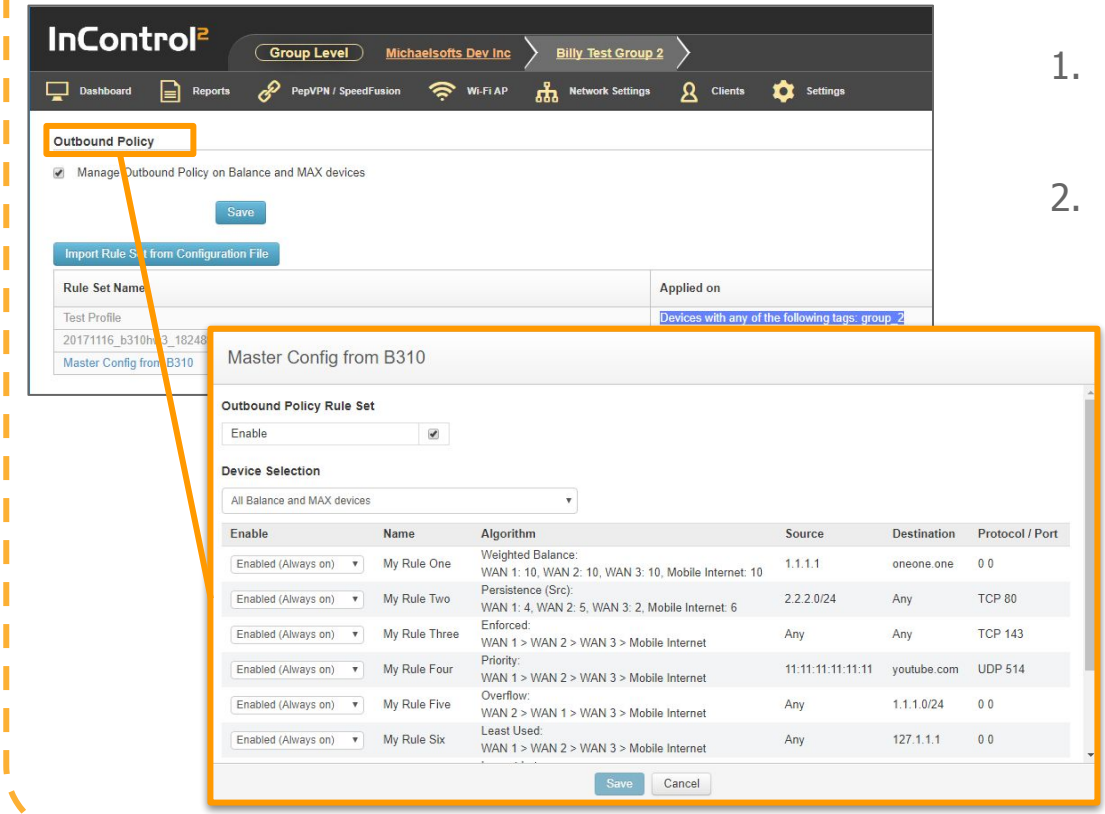


InControl 2: Firewall Rules



1. Extract the **Configuration File** from a pre-configured "Master" **Peplink** Device and upload it to **InControl 2**.
2. **InControl 2** extracts the **Firewall config** and lets you apply it to other **Peplink** devices in the **Group**!

InControl 2: Outbound Policy



1. Extract the **Configuration File** from a pre-configured "Master" **Peplink** Device and upload it to **InControl 2**.
2. **InControl 2** extracts the **Traffic Steering Rules** and lets you apply it to other **Peplink** devices in the **Group**!

InControl 2: Outbound Policy

NEW: Configure Outbound Policy in InControl 2 directly (IC2 update 2.8)

Dashboard | Reports | PepVPN / SpeedFusion | Wi-Fi AP | Network Settings | Clients | Settings

Outbound Policy

☑ Manage Outbound Policy on Balance and MAX devices

Save

Create Rule Set | Import Rule Set from Configuration File

Rule Set Name	Applied on
20180817_h4hw1_29323078D40C (1)	All devices
Test-Travis	Devices with any of the following tags: Social

Outbound Policy Rule Set Name

Outbound Policy Rule Set

Enable ☐

Device Selection

All Balance and MAX devices

Note: If two enabled rule sets are applied to the same device, the first rule set from the top will be applied.

Name	Enable	Algorithm	Source	Destination	Protocol / Port	Action
		PepVPN / OSPF / RIPv2 Routes				
HTTPS_Persistence	Enabled (Always on)	Persistence (Src): (Auto)	Any	Any	TCP 443	🗑
Default		(Auto)				

Add Rule

Save | Cancel

Outbound Policy Rule Name

Enable: Enabled (Always on)

Source: Any

Destination: Any

Protocol: Any ← : : Protocol Selection Tool : :

Algorithm: Weighted Balance

Load Distribution Weight

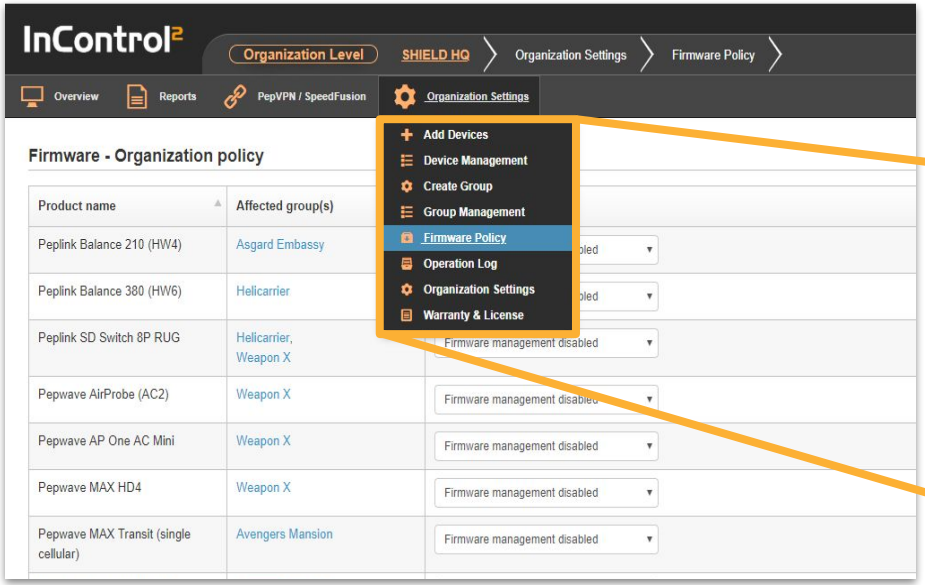
Connection	Weight	
WAN Connection Name	10	+

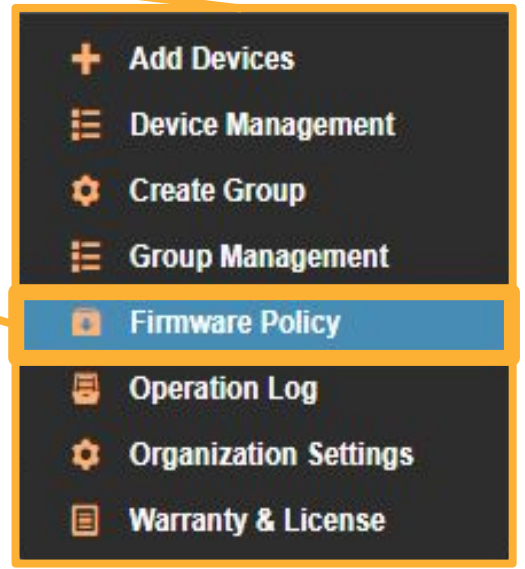
Terminate Sessions on Link Recovery: ☐ Enable

OK | Cancel

InControl 2: Zero Touch (Firmware)

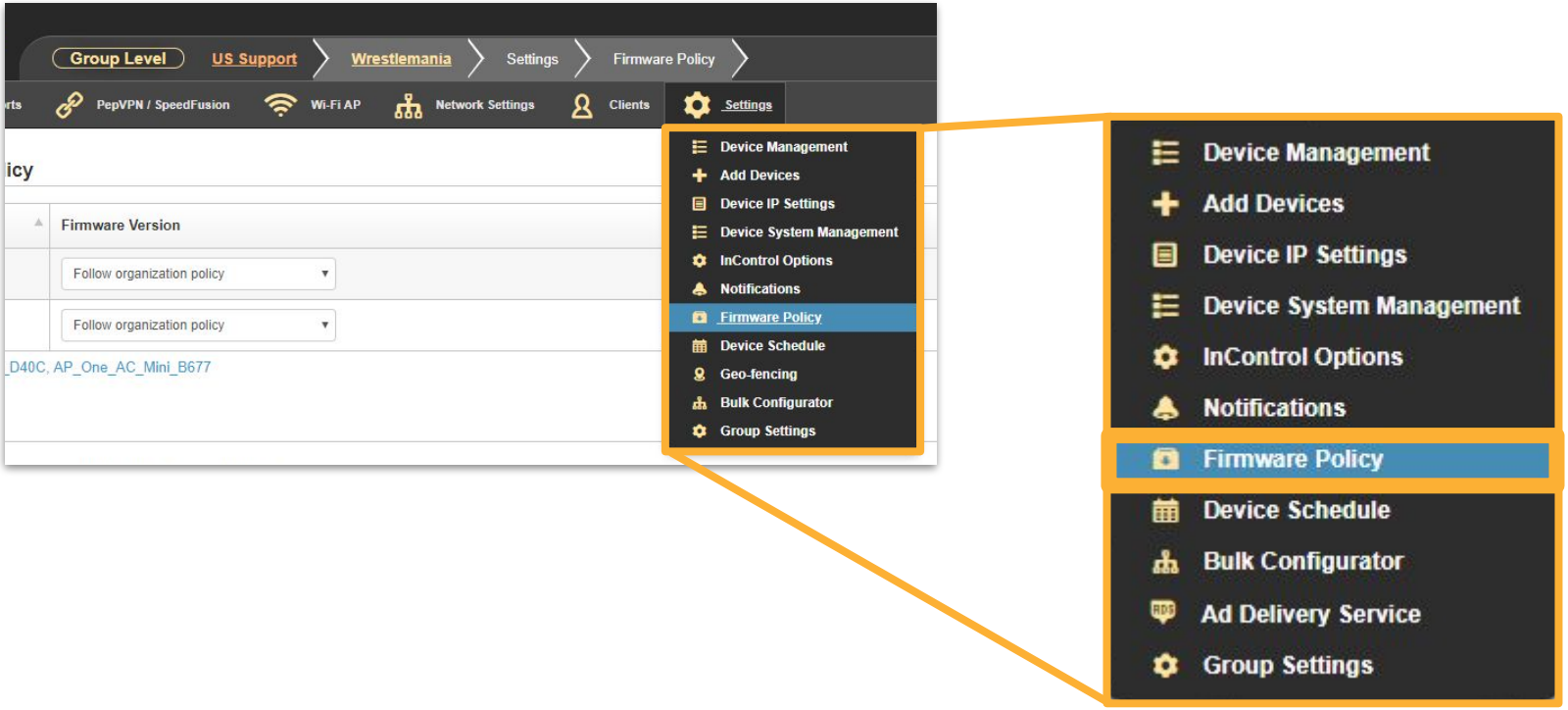
Organization Level > Organization Settings > Firmware Policy





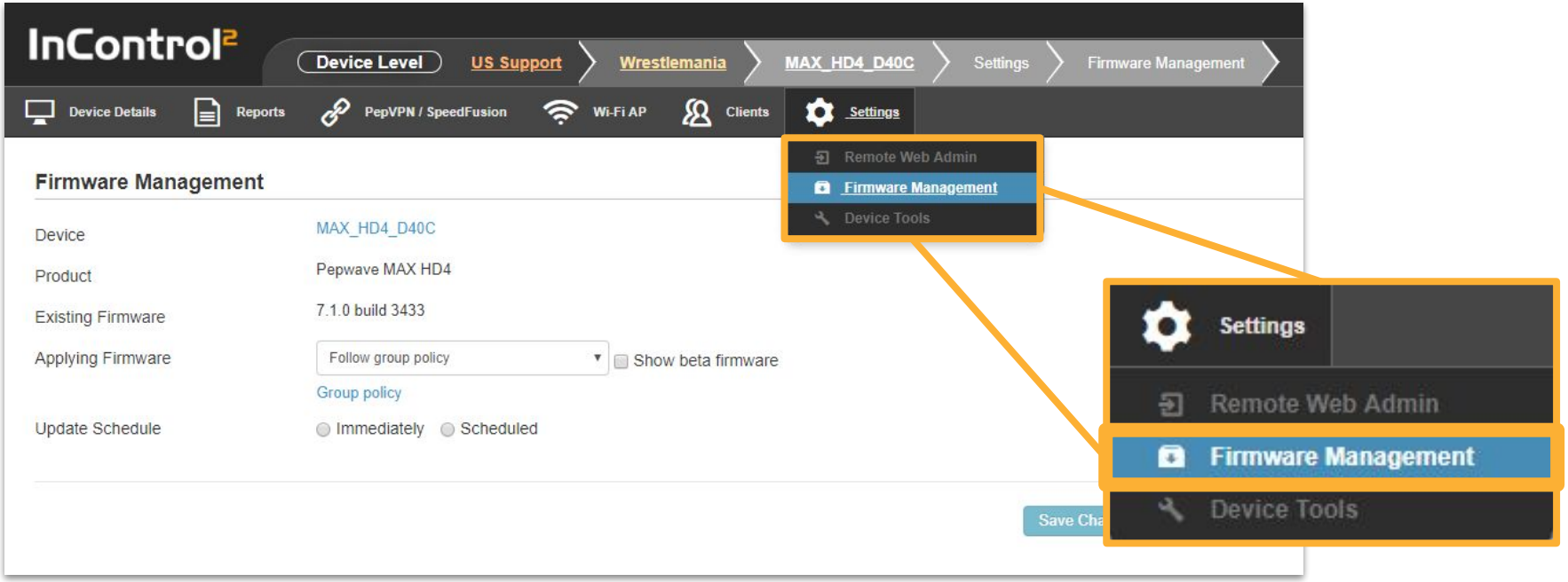
InControl 2: Zero Touch (Firmware)

Group Level > Settings > Firmware Policy



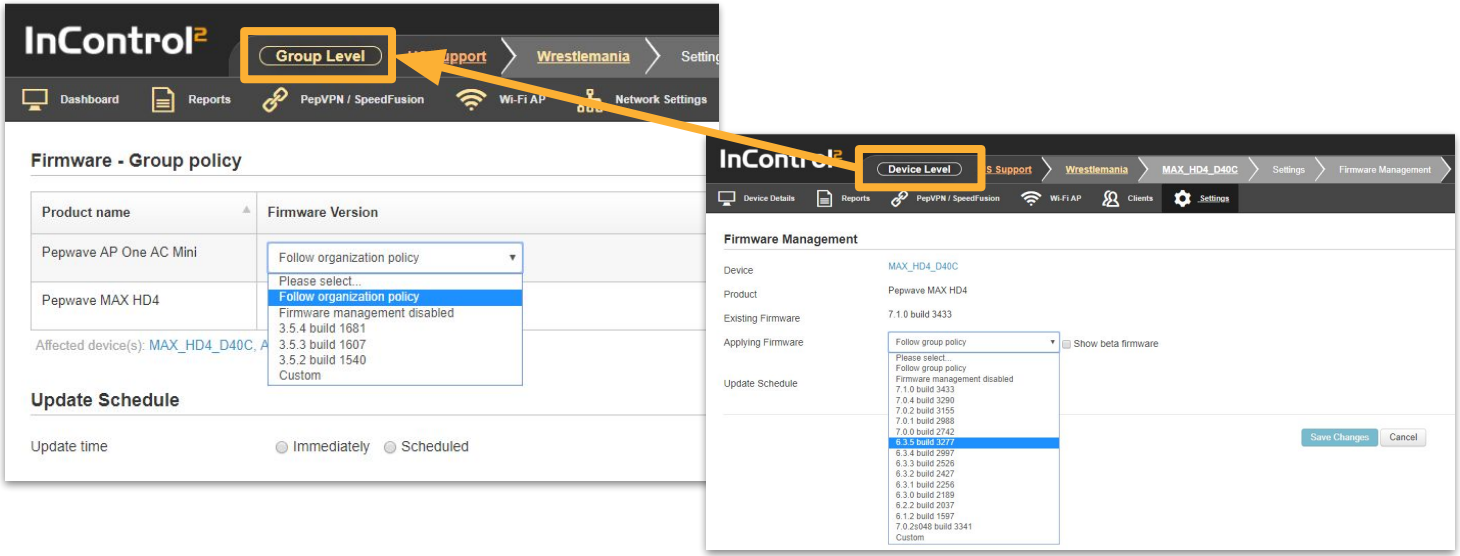
InControl 2: Zero Touch (Firmware)

Device Level > Settings > Firmware Management



InControl 2: Zero Touch (Firmware)

Overview



By default, **firmware updates follow the level above for direction** but you've got the ability to **setup a manual update to override the higher level update**.

Once the firmware update is setup, you've the option to start immediately or schedule for a later time.

InControl 2: Zero Touch (Firmware)

Beta Firmware

Firmware - Organization policy

Product name	Affected group(s)	Firmware Version	Show beta firmware
Peplink Balance 210 (HW4)	Asgard Embassy	Firmware management disabled	
Peplink Balance 380 (HW6)	Helicarrier	Firmware management disabled	

Firmware - Group policy

Product name	Firmware Version	Show beta firmware	Release note
Pepwave AP One AC Mini	Follow organization policy		
Pepwave MAX HD4	Follow organization policy		

Affected device(s): MAX_HD4_D40C, AP_One_AC_Mini_B677

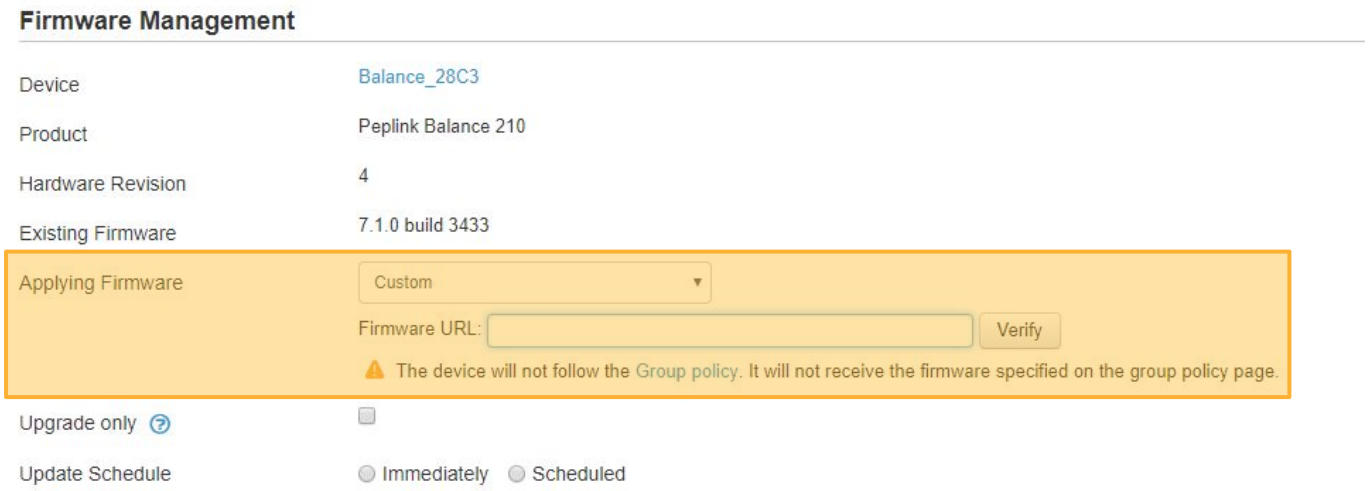
Firmware Management

Device	MAX_HD4_D40C
Product	Pepwave MAX HD4
Existing Firmware	7.1.0 build 3433
Applying Firmware	Follow group policy Group policy Show beta firmware
Update Schedule	Immediately / Scheduled

- Also assign **Beta Firmware** releases from **InControl 2**

InControl 2: Zero Touch (Firmware)

Custom Firmware



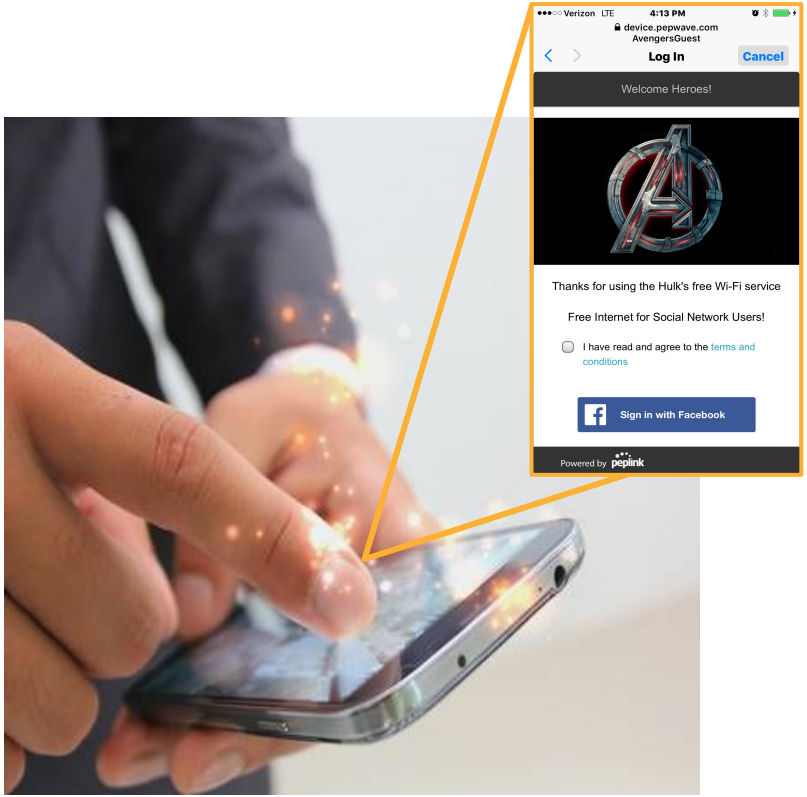
Custom Firmware updates can be assigned at all **IC2** Levels. The common scenario is test firmware from the Support or Engineering Team.

InControl 2: Zero Touch (Wi-Fi)

Wi-Fi Configuration: Captive Portal

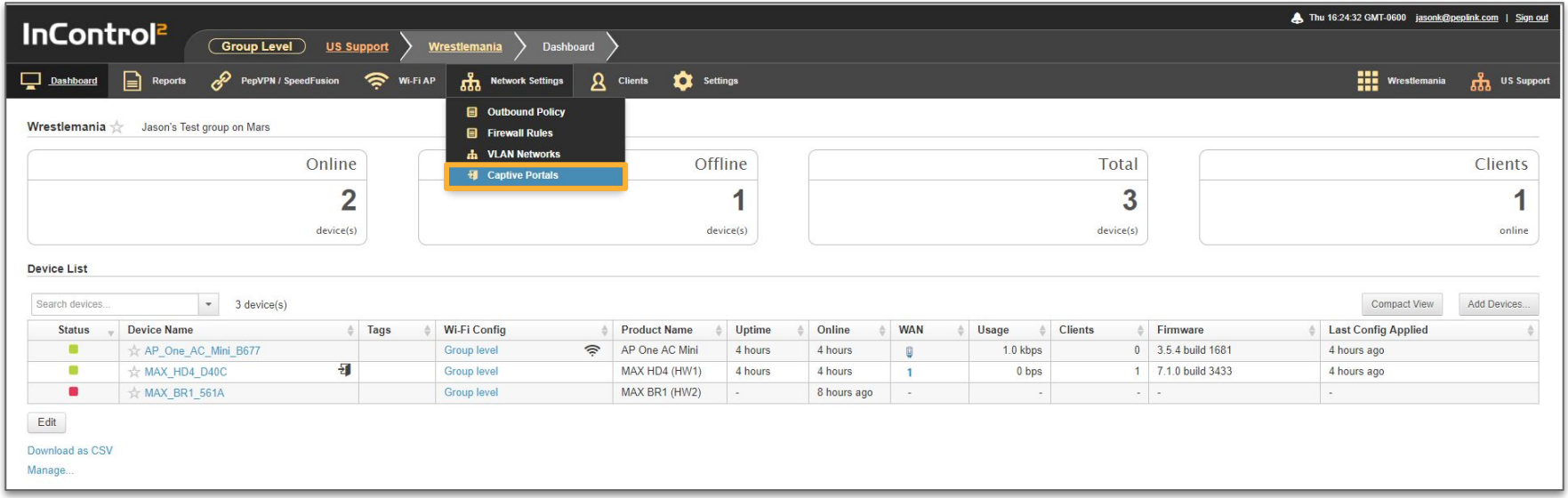
Customize and set up your network's **Wi-Fi Captive Portal** however you like!

- Multiple **Authentication methods**
  - Multiple can be active
- **Custom Graphics**
- **Custom Text**
  - Custom **Terms and Conditions**.



InControl 2: Group Level

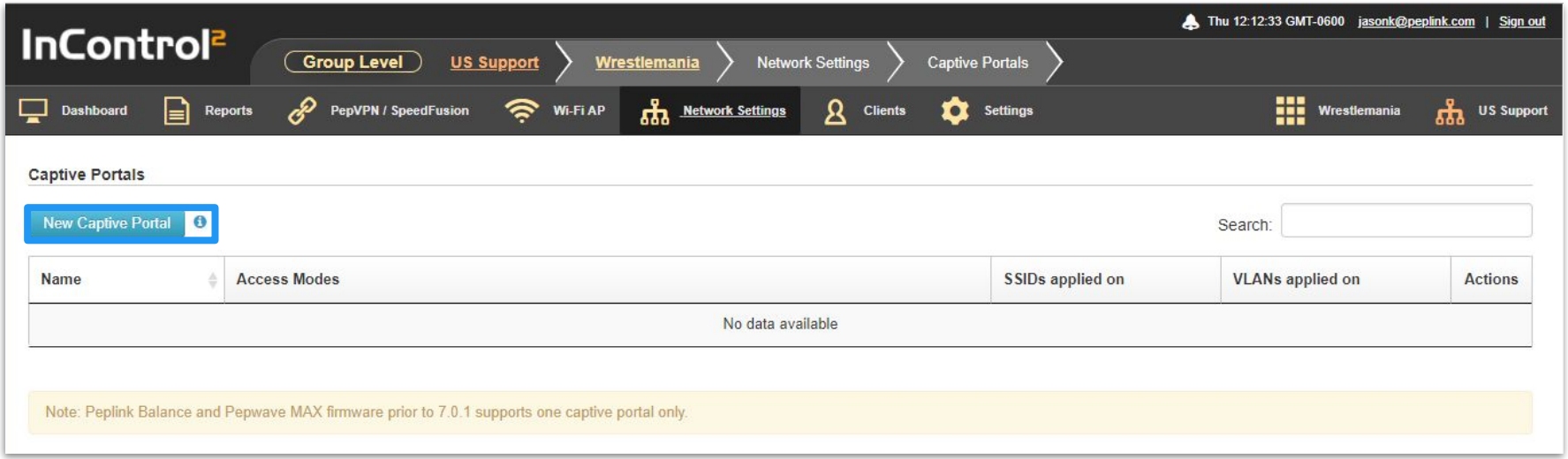
Wi-Fi Configuration: Captive Portal



- **Group** Level > **Network Settings** > **Captive Portals**

InControl 2: Group Level

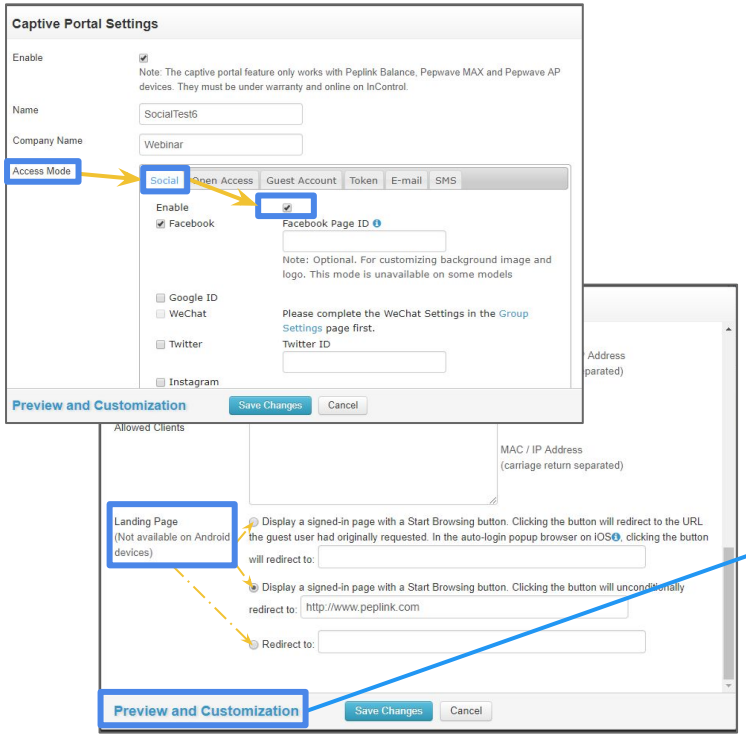
Wi-Fi Configuration: Captive Portal

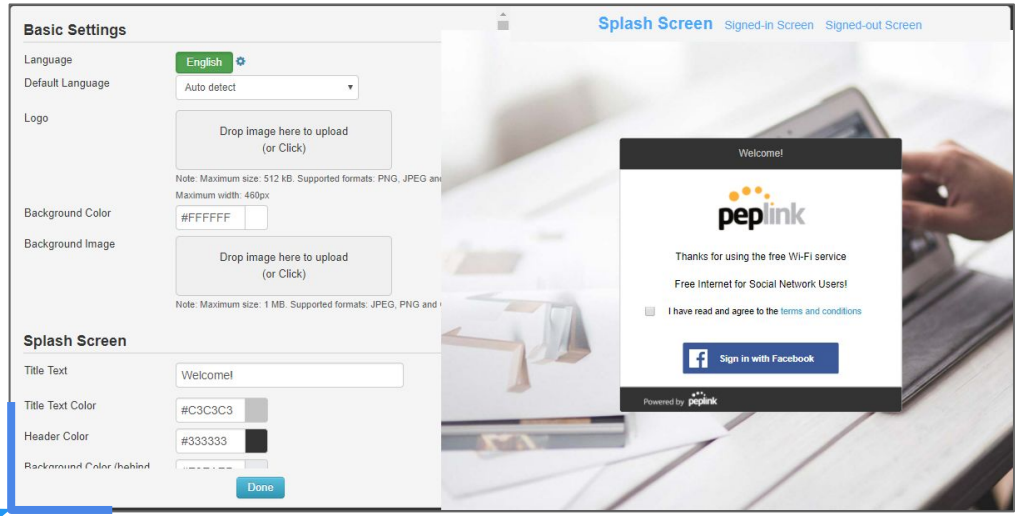


- Click **New Captive Portal**

InControl 2: Group Level

Wi-Fi Configuration: Captive Portal



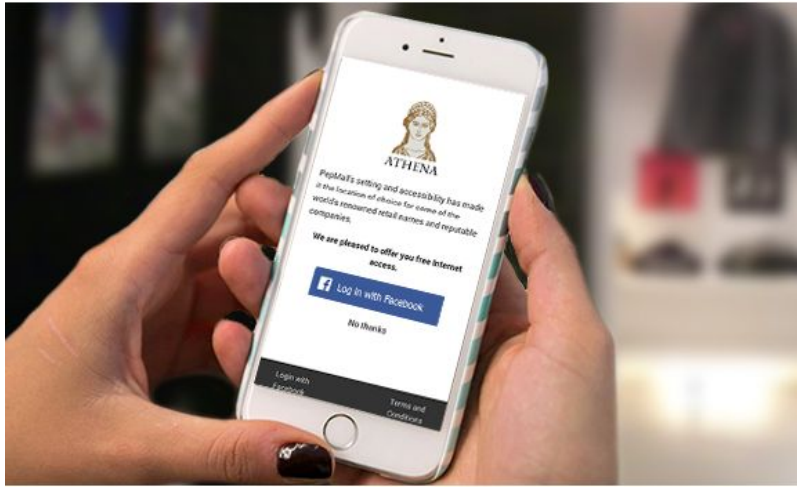


InControl 2: Group Level

Wi-Fi Configuration: Captive Portal (Social Wi-Fi)

InControl 2 gives you the freedom to decide whether you want to give Facebook Login as a choice and how your visitors stay connected.

Whether it's time-based, usage based- you'll find it here. It's as simple as a few clicks and it's all web-based so you can manage everything no matter where you are.

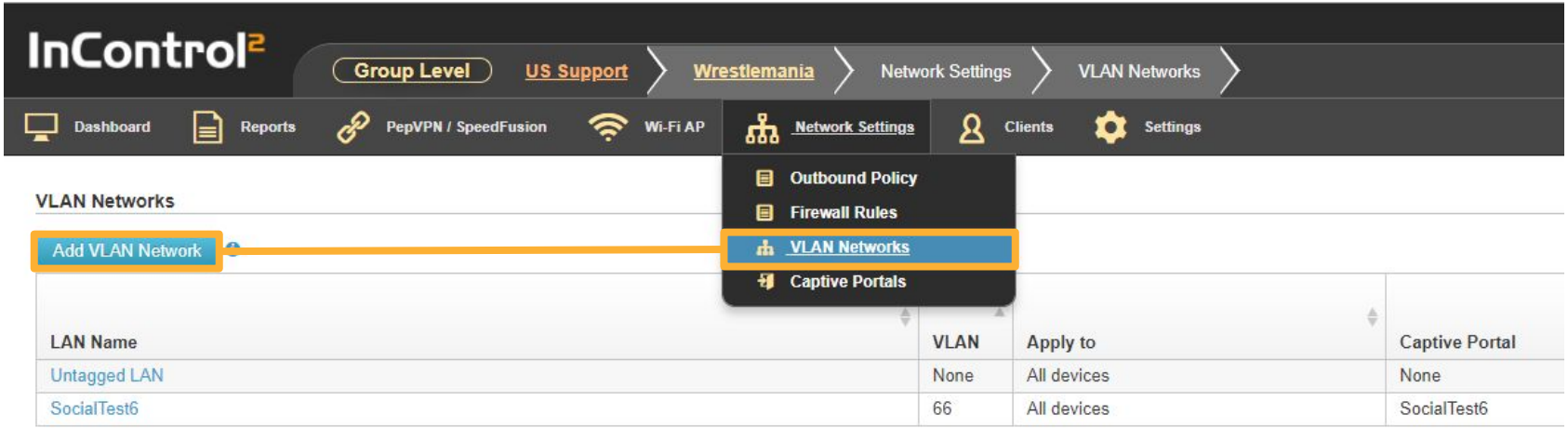


Log In With:

Facebook | LinkedIn | Twitter | Sina Weibo | E-Mail

InControl 2: Group Level

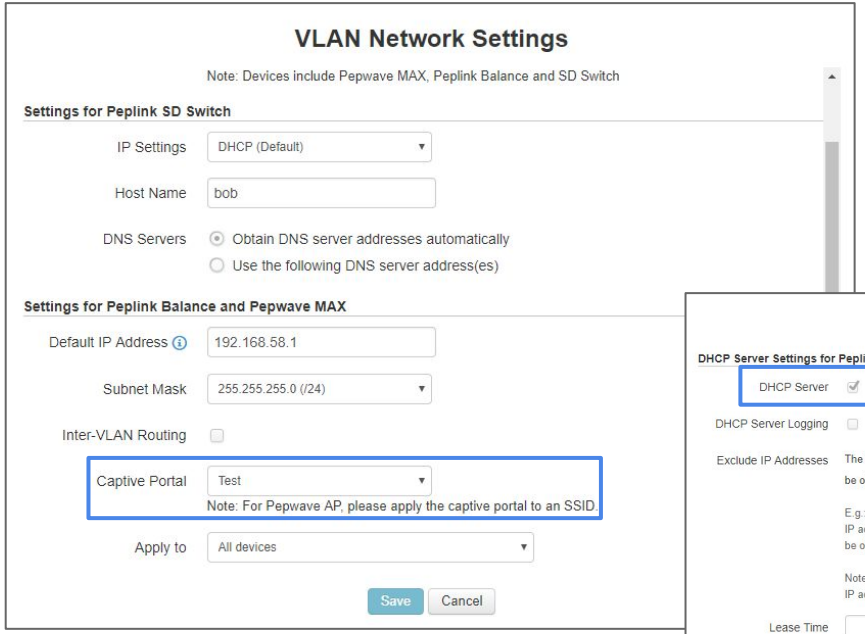
Wi-Fi Configuration - VLAN setup



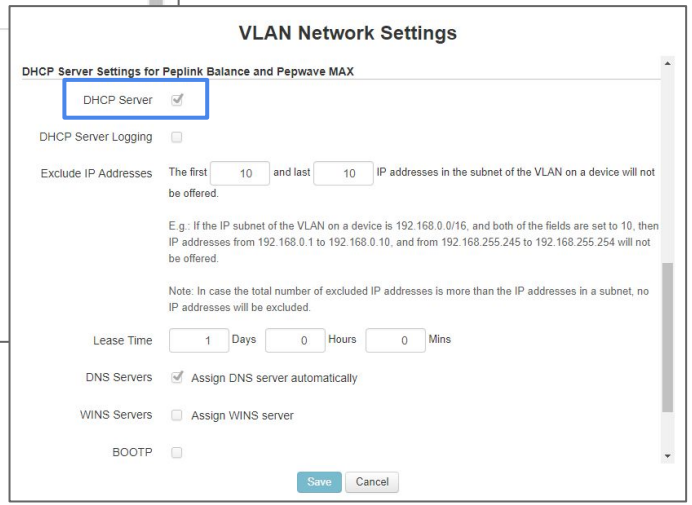
- **Group Level** > **Network Settings** > **VLAN Networks** > **Add VLAN Network**
  - Setup the VLAN Name/Tag and subnet info

InControl 2: Group Level

Wi-Fi Configuration - VLAN setup



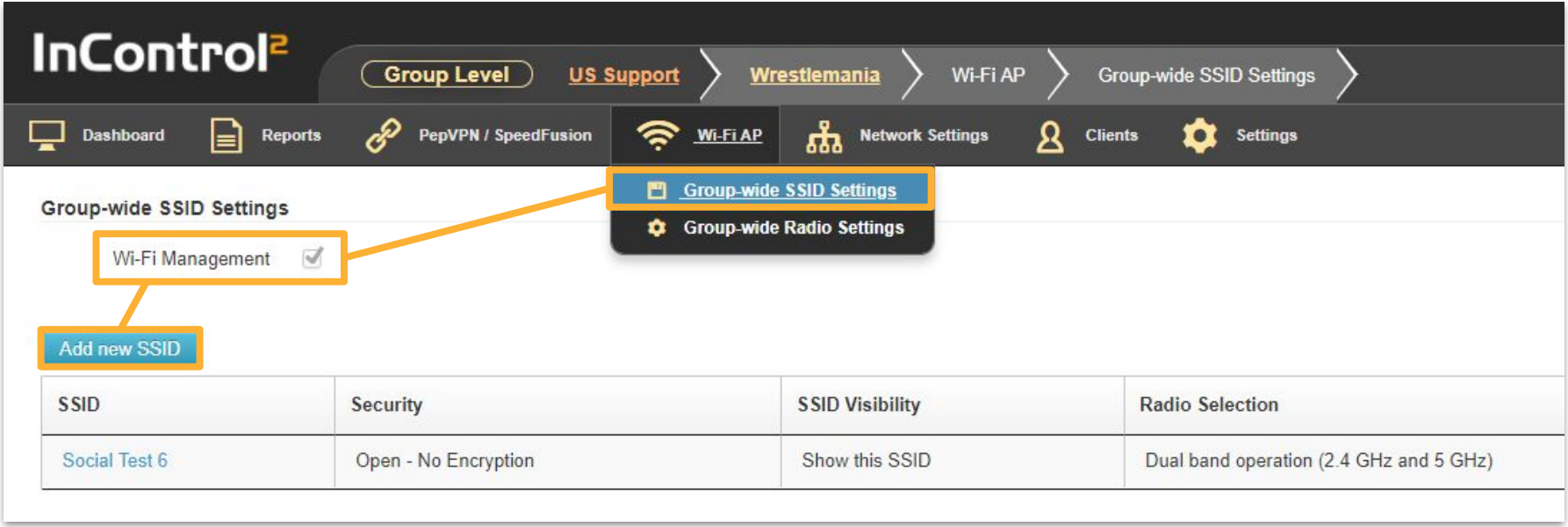
- If you're configuring a **MAX (built in AP)**, associate the **Captive Portal** to the **VLAN**



- **Enable DHCP** for your created **VLAN**

InControl 2: Group Level

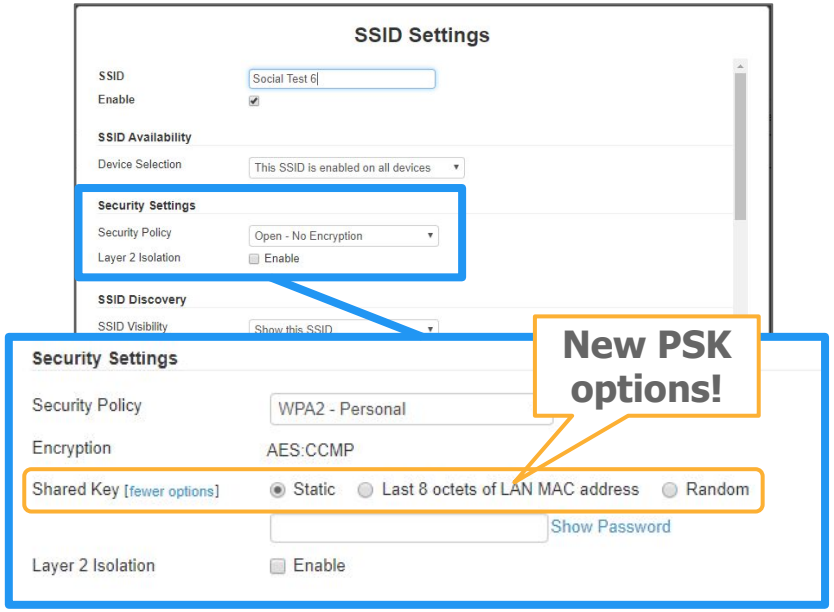
Wi-Fi Configuration - SSID setup



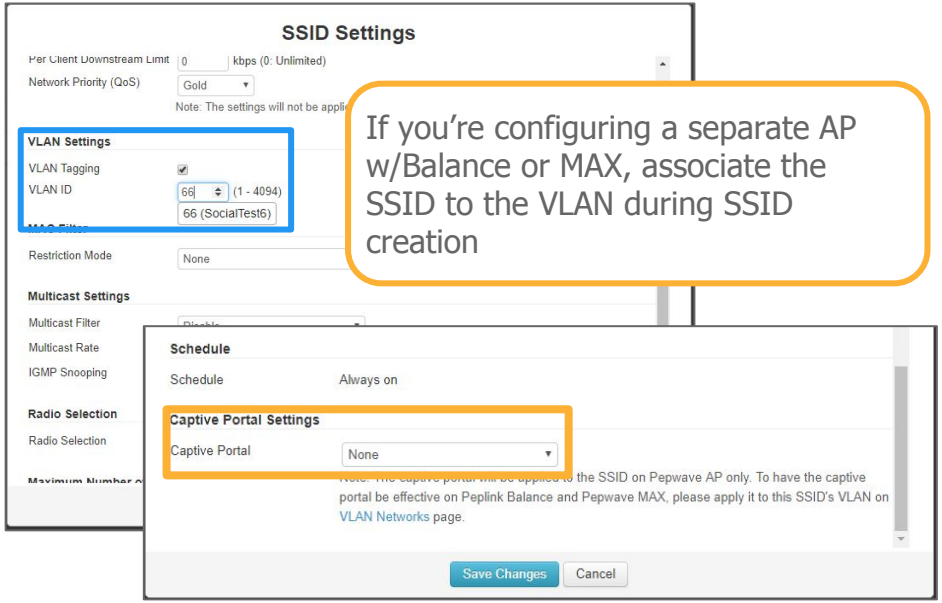
- **Group Level** > **Wi-Fi AP** > **Group-wide SSID Settings**
  - Enable Wi-Fi Management > Add new SSID

InControl 2: Group Level

Wi-Fi Configuration - SSID setup



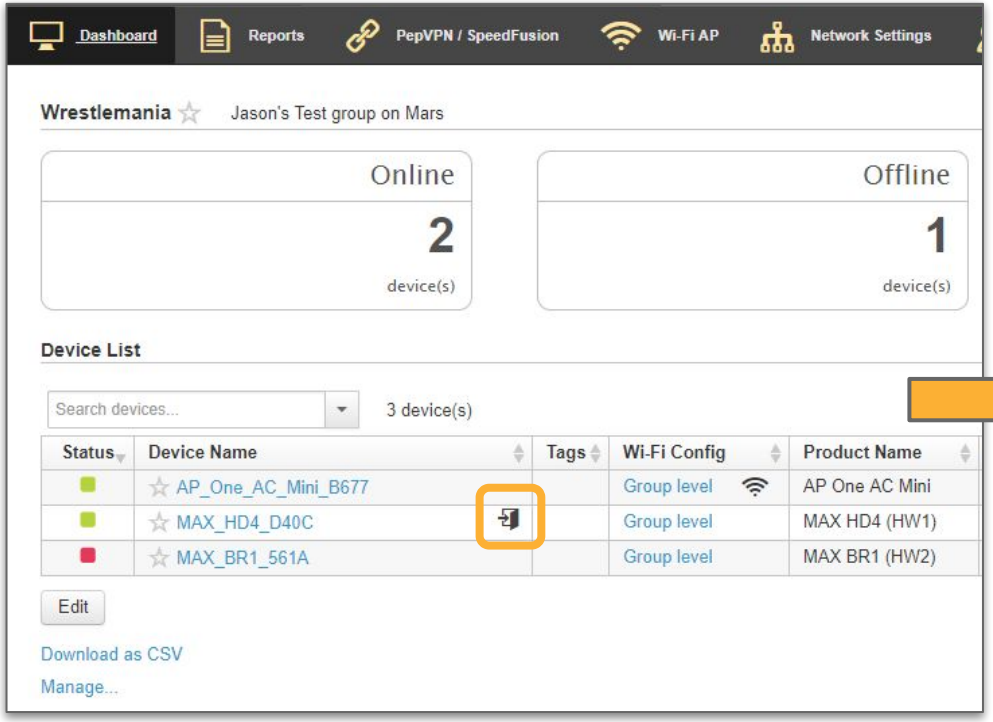
New PSK options!

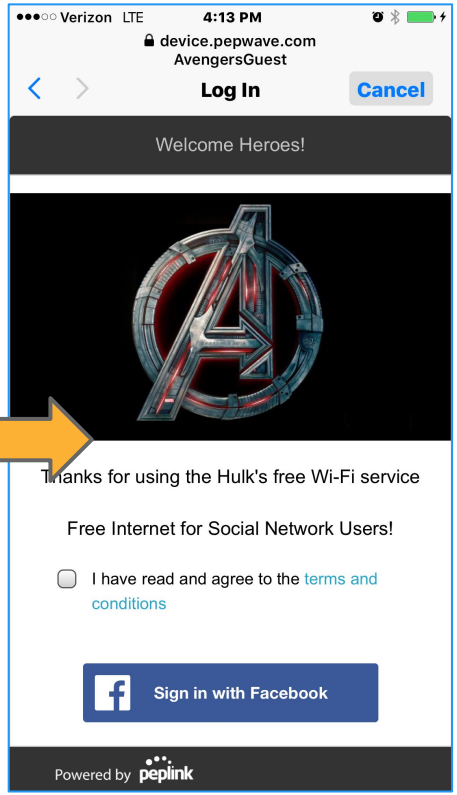


If you're configuring a separate AP w/Balance or MAX, associate the SSID to the VLAN during SSID creation

InControl 2: Group Level

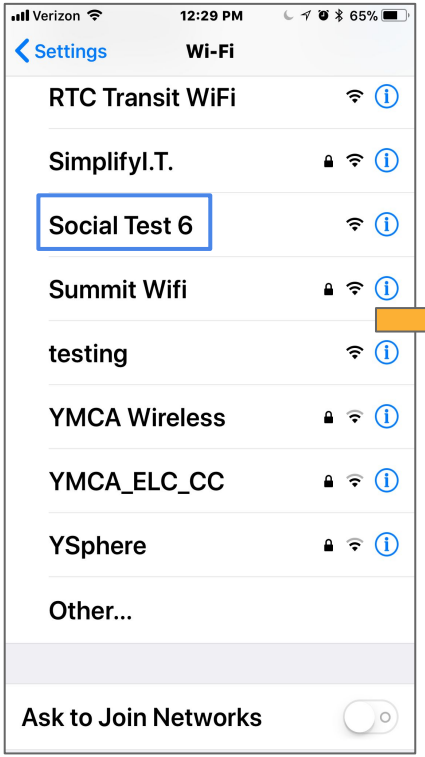
Wi-Fi Configuration - SSID setup

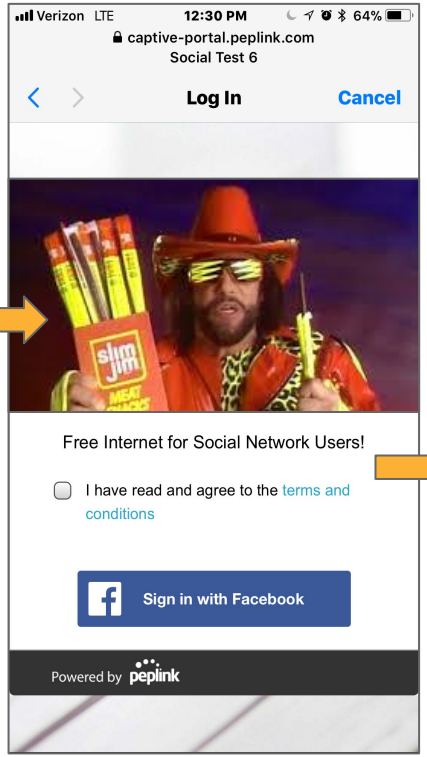


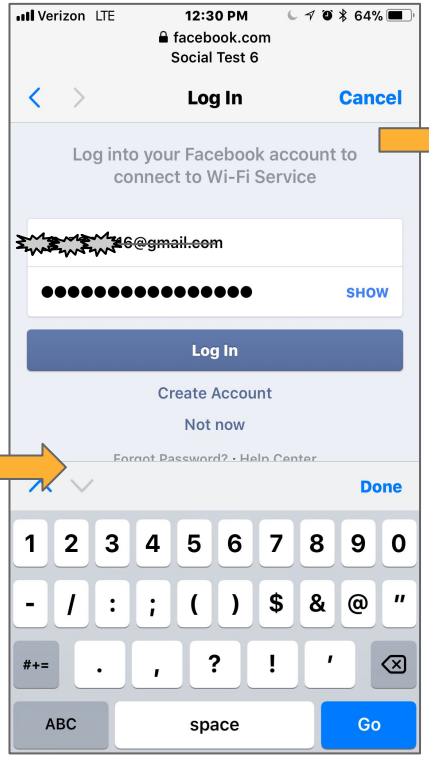


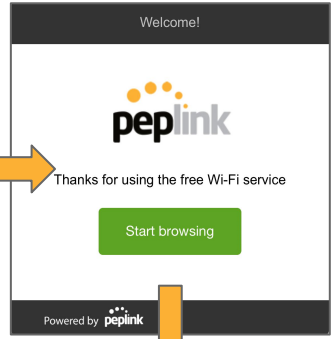
InControl 2: Group Level

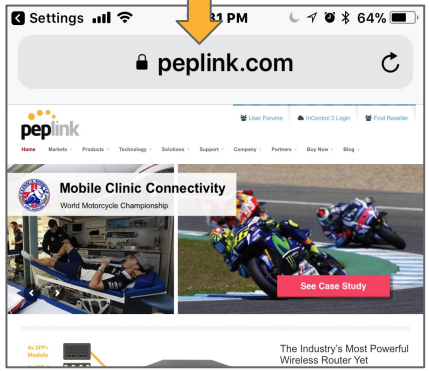
Wi-Fi Configuration - Login Path





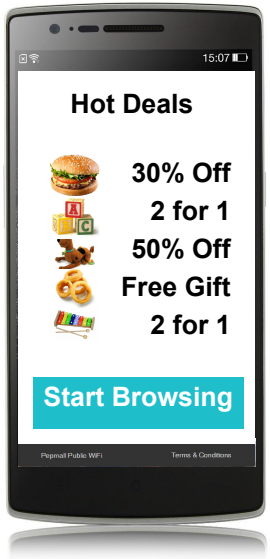


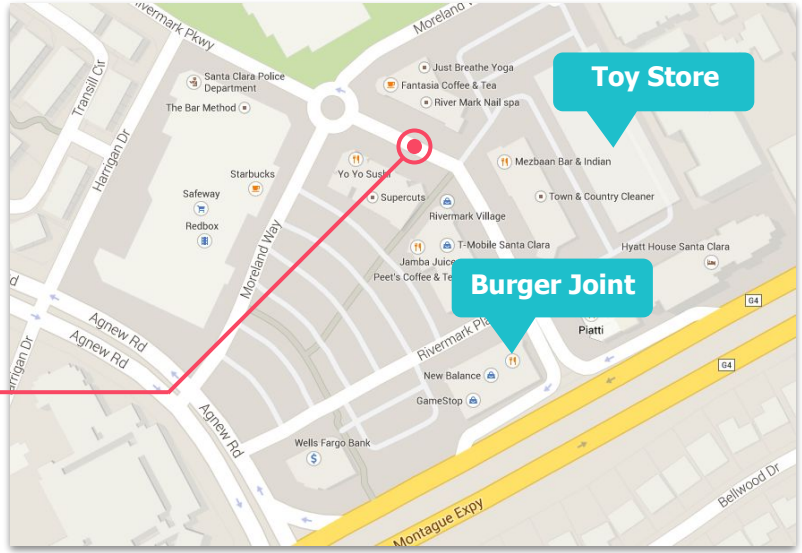




InControl 2: Group Level

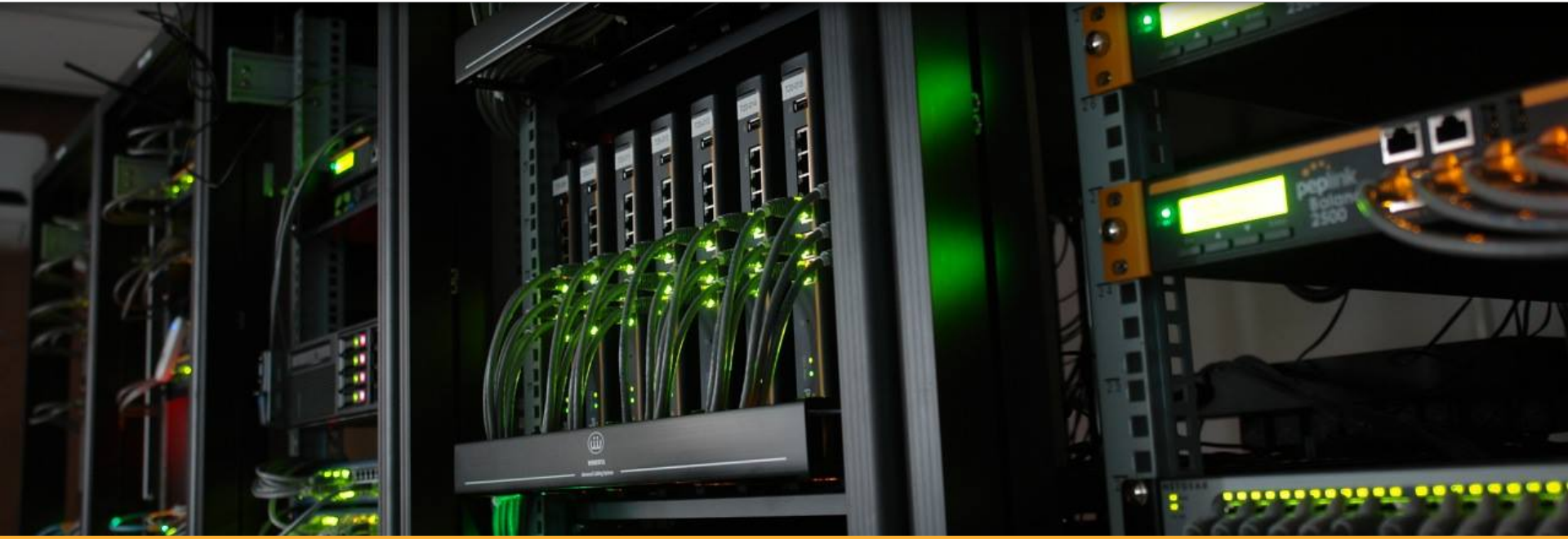
Wi-Fi Configuration - Ad Delivery Service





- Wi-Fi providers can serve **targeted ads** during the login process.
- Available as an **add-on/purchase** for **InControl 2**
- Variety of Ad Campaigns available
  - *Banner Ads*
  - *Survey*
  - *Video*

peplink



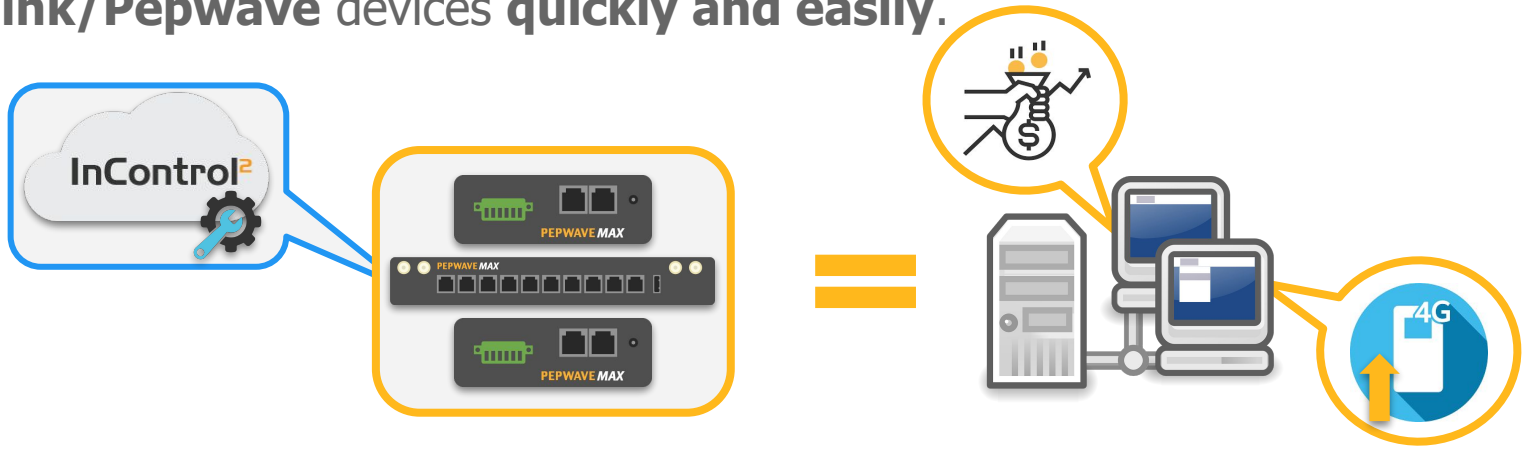
InControl 2 - Data Usage Requirements

InControl2 -Low Data Usage Mode

Overview

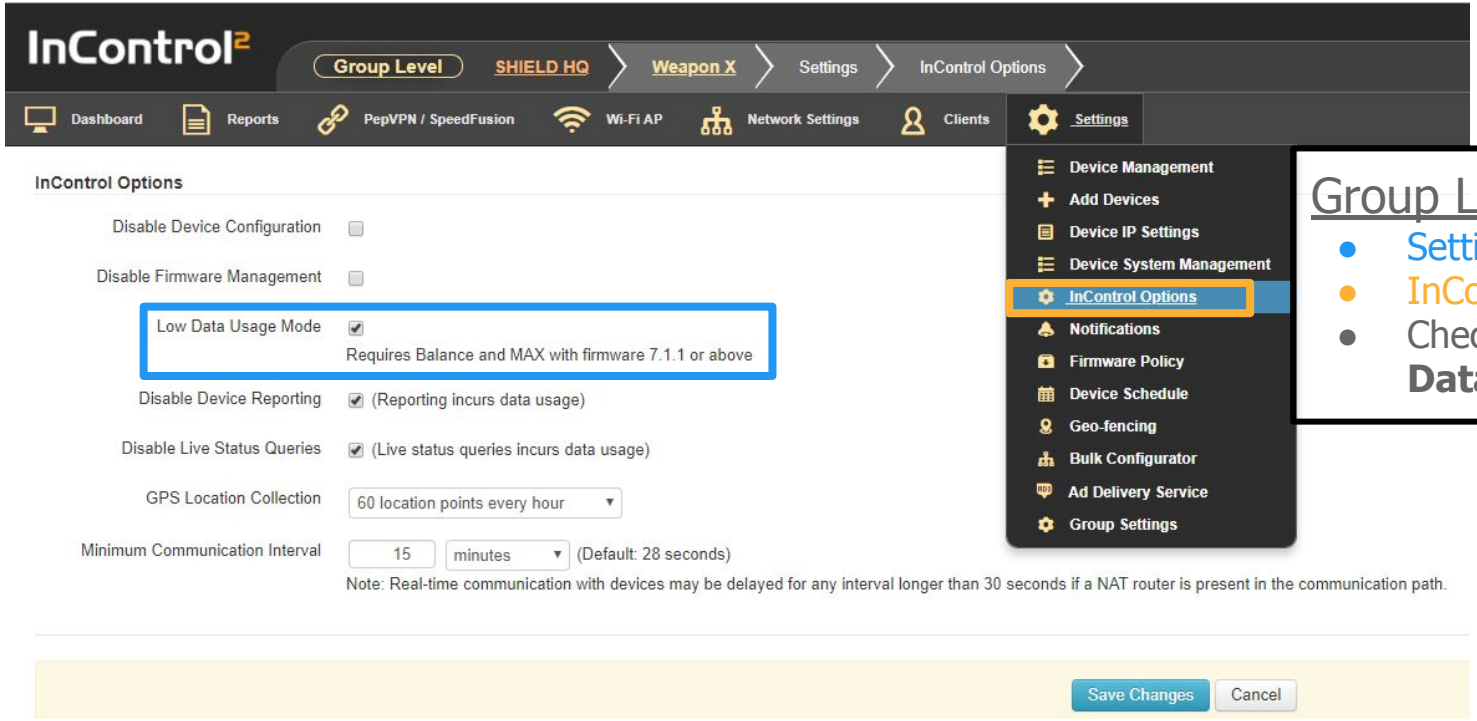
InControl 2 allows you to adjust how much data it uses for various tracking and reporting functions, the end result is both **money and data saved** on your network.

Since these updates are done from the Cloud, they're pushed to multiple **Peplink/Pepwave** devices **quickly and easily**.



InControl 2 - Low Data Usage Mode

Configuration



Group Level:

- Settings
- InControl Options
- Checkmark **Low Data Usage Mode**

InControl 2 - Low Data Usage Mode

Overview

Estimated Base Data Usage

130.9 MB with GPS data
125.3 MB without GPS data

(Click me for more options)

Adjusts in real-time as settings are changed to show **Bandwidth usage**

InControl Options

Disable Device Configuration ☐

Disable Firmware Management ☐

Low Data Usage Mode ☑
Requires Balance and MAX with firmware 7.1.1 or above

Disable Device Reporting ☑ (Reporting incurs data usage)

Disable Live Status Queries ☑ (Live status queries incurs data usage)

Enabled when **Low Data Usage Mode** is enabled.

GPS Location Collection: 60 location points every hour

Minimum Communication Interval: 15 minutes (Default: 28 seconds)

Note: Real-time communication with devices may be delayed for any interval longer than 30 seconds if a NAT router is present in the communication path.

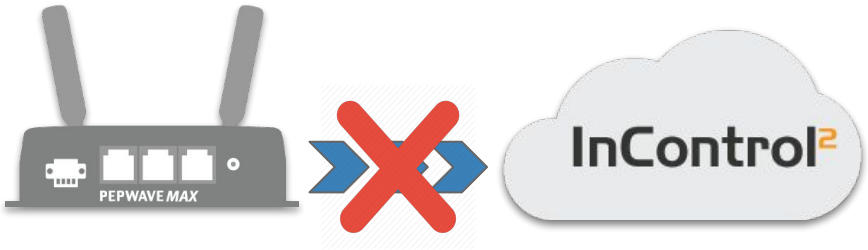
InControl 2 - Low Data Usage Mode

InControl Options

- Disable Device Configuration
- Disable Firmware Management
- Low Data Usage Mode
- Disable Device Reporting
- Disable Live Status Queries
- GPS Location Collection
- Minimum Communication Interval

Disable Device Reporting -

- Stops devices from posting reporting data to **InControl 2**.
  - Enabled by default when you turn on ***Low Data Usage Mode***
  - Reports, such as device, Wi-Fi, bandwidth, cellular reports, etc., will be unavailable.



InControl 2 - Low Data Usage Mode

InControl Options

Disable Device Configuration

Disable Firmware Management

Low Data Usage Mode

Disable Device Reporting

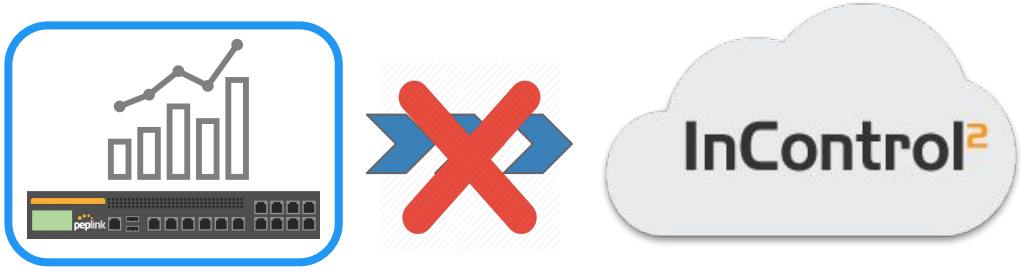
Disable Live Status Queries

GPS Location Collection

Minimum Communication Interval

Disable Live Status Queries -

- Stops devices from reporting Live status updates (e.g. throughput, WAN state, etc.), making them unavailable. However device online status is unaffected
  - Enabled by default when you turn on ***Low Data Usage Mode***



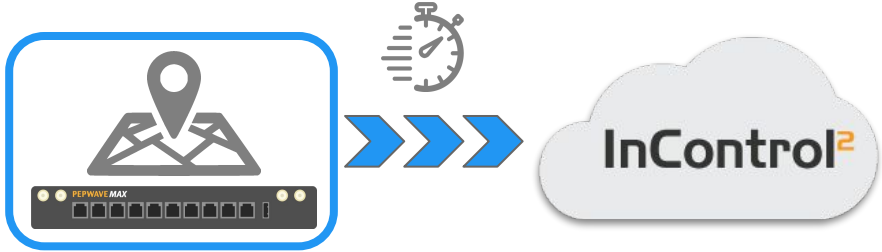
InControl 2 - Low Data Usage Mode

InControl Options

- Disable Device Configuration
- Disable Firmware Management
- Low Data Usage Mode
- Disable Device Reporting
- Disable Live Status Queries
- GPS Location Collection
- Minimum Communication Interval

GPS Location Collection -

- Determine the number of times that InControl 2 will query a unit for GPS information
  - 30 location points per minute (default setting)
  - 60 location points per every hour
    - *Default setting when **Low Data Usage Mode** is enabled*
  - 1 location point every hour
  - Disabled



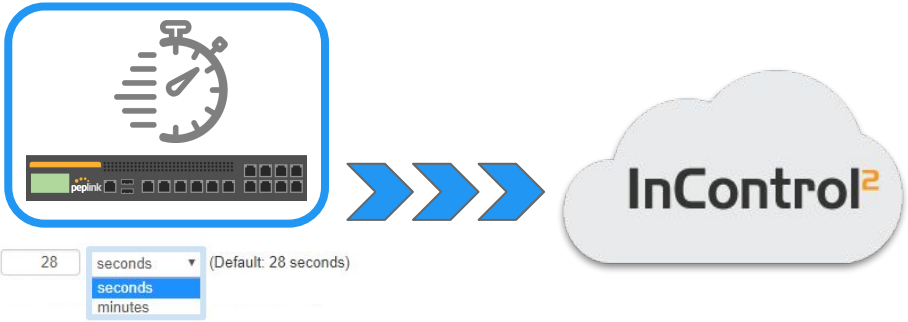
InControl 2 - Low Data Usage Mode

InControl Options

- Disable Device Configuration
- Disable Firmware Management
- Low Data Usage Mode
- Disable Device Reporting
- Disable Live Status Queries
- GPS Location Collection
- Minimum Communication Interval

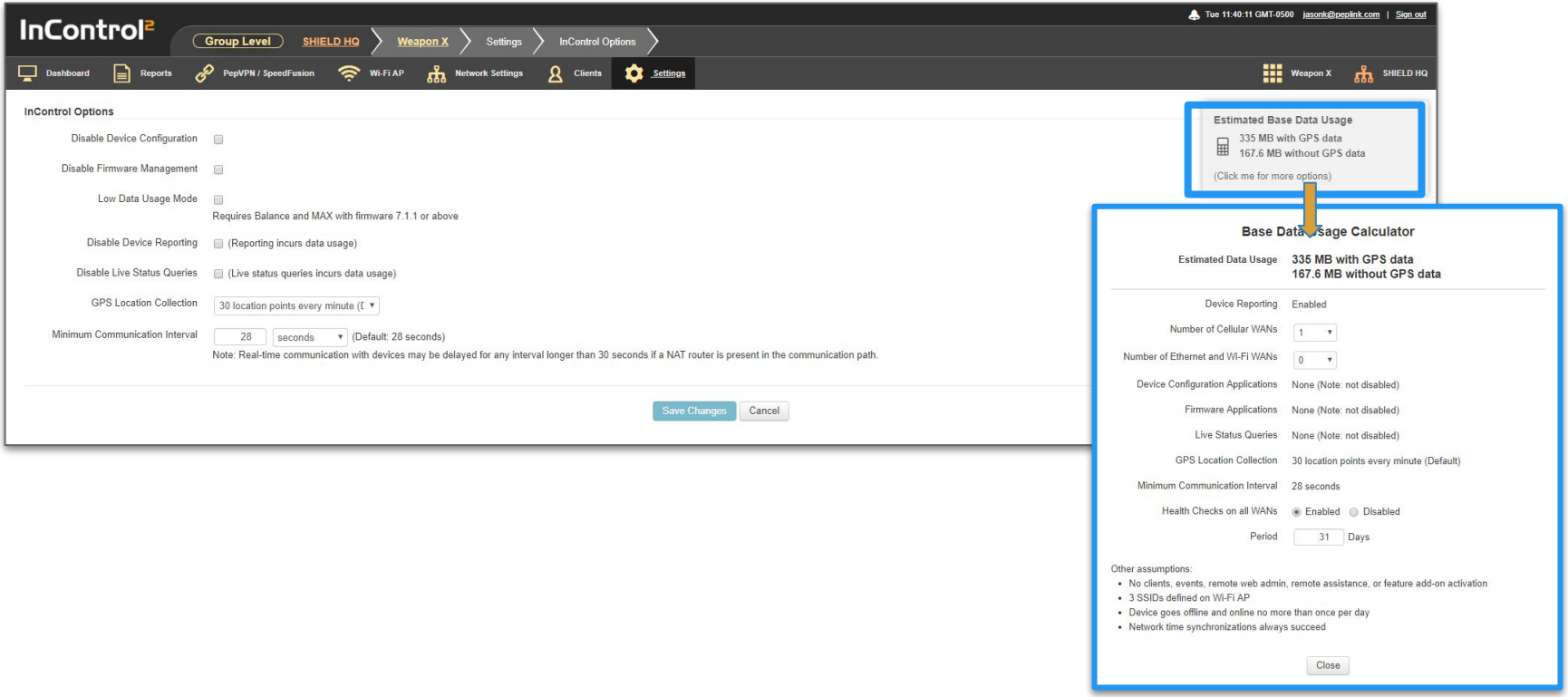
Minimum Communication Interval -

- **Determine the number of times that a device will "call home to InControl 2 (Default: 28 seconds)**
  - **Note: Real-time communication with devices may be delayed for any interval longer than 30 seconds if a NAT router is present in the communication path.**
  - **Customizable/manual entry**



InControl 2 - Help Calculator Tool

Group Level > Settings > Internet Options > Estimated Base Data Usage



InControl 2 - Help Calculator Tool

Overview

Base Data Usage Calculator

Estimated Data Usage	335 MB with GPS data 167.6 MB without GPS data
Device Reporting	Enabled
Number of Cellular WANs	1
Number of Ethernet and Wi-Fi WANs	0
Device Configuration Applications	None (Note: not disabled)
Firmware Applications	None (Note: not disabled)
Live Status Queries	None (Note: not disabled)
GPS Location Collection	30 location points every minute (Default)
Minimum Communication Interval	28 seconds
Health Checks on all WANs	(•) Enabled ( ) Disabled
Period	31 Days

Other assumptions:

- No clients, events, remote web admin, remote assistance, or feature add-on activation
- 3 SSIDs defined on Wi-Fi AP
- Device goes offline and online no more than once per day
- Network time synchronizations always succeed

Close

Help Tool to determine data usage

- **Doesn't change settings**
  - Used to plan out things before configuration
- **Very Customizable**

InControl 2 - SIM Pooling

InControl 2 - SIM Pooling

Overview

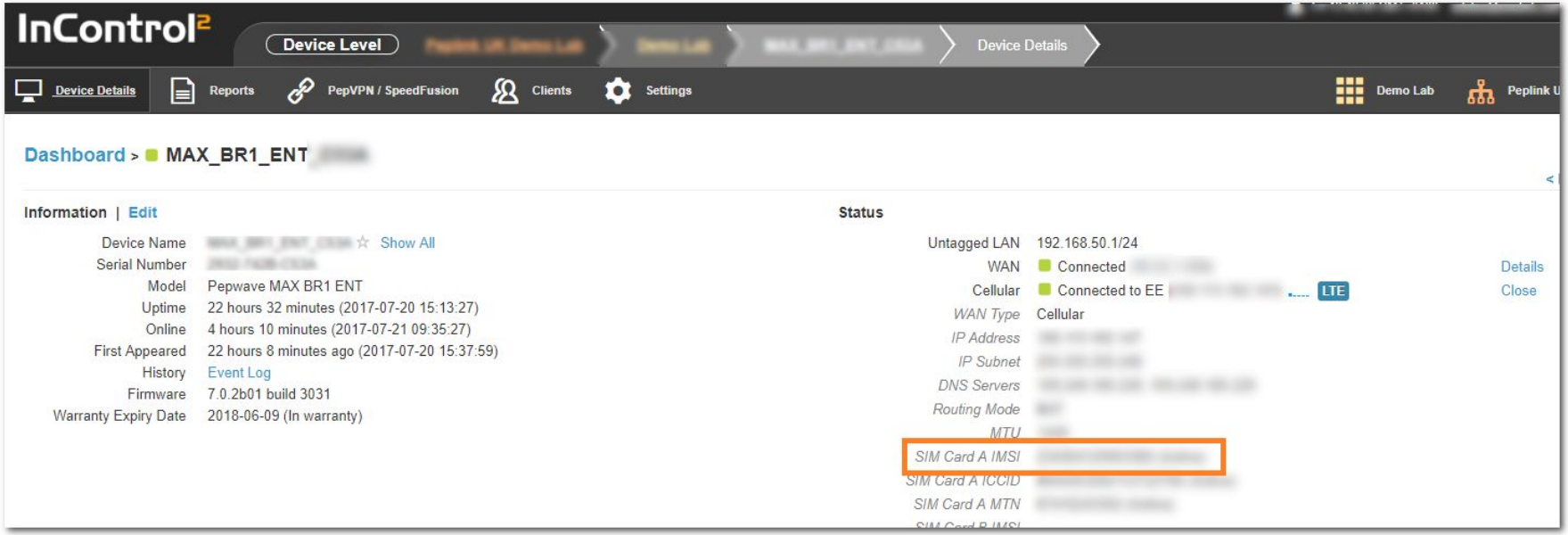
SIM Pooling allows you to define multiple **SIM**s into a pool for your **InControl 2** **Group** and apply a bandwidth quota to that **Group**. Once the limit is reached, email notifications are sent out.

Requirement - Current Firmware

InControl 2 - SIM Pooling

Configuration

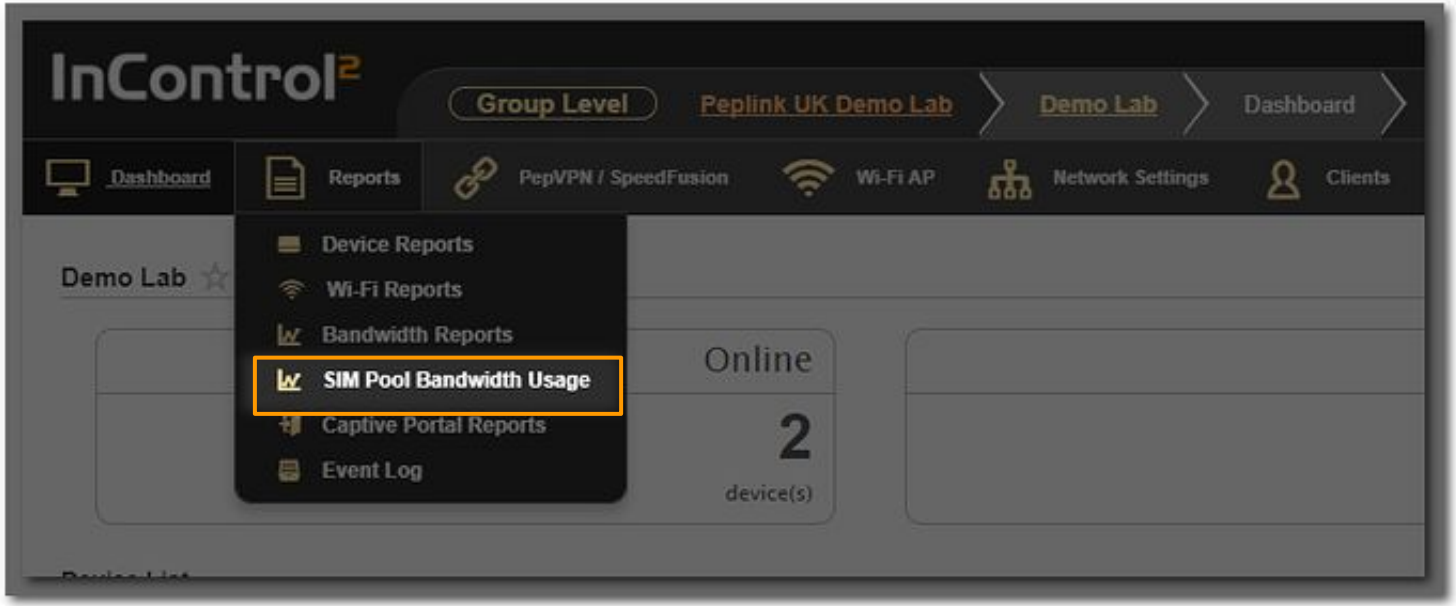
To create a new **SIM** Pool, note the **IMSI number** from each **SIM** in the Pool. This is found under **Device Details** in **InControl 2**.



InControl 2 - SIM Pooling

Configuration

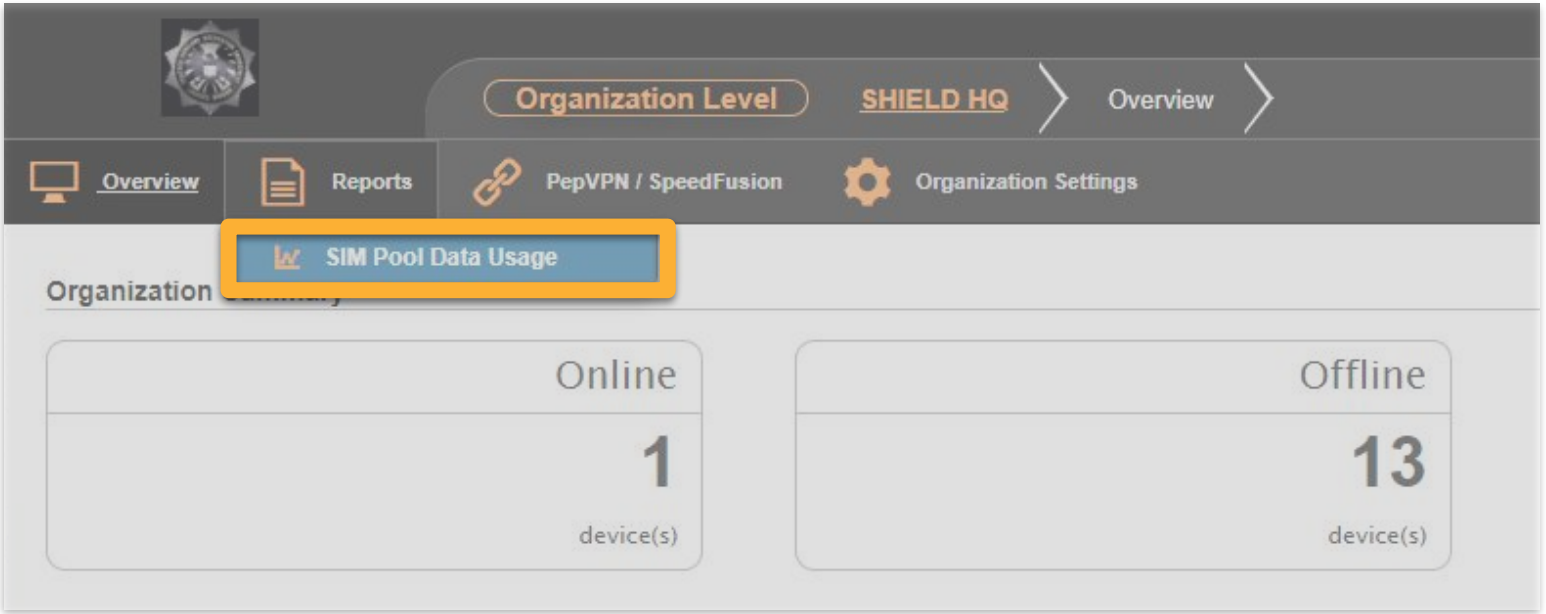
From the **Group** Level (that the **Pool** is being made) -
Go to **Reports** > **SIM Pool Bandwidth Usage**



InControl 2 - SIM Pooling

New Configuration Option

From the **Organization** Level (that the **Pool** is being made) -
Go to **Reports** > **SIM Pool Bandwidth Usage**

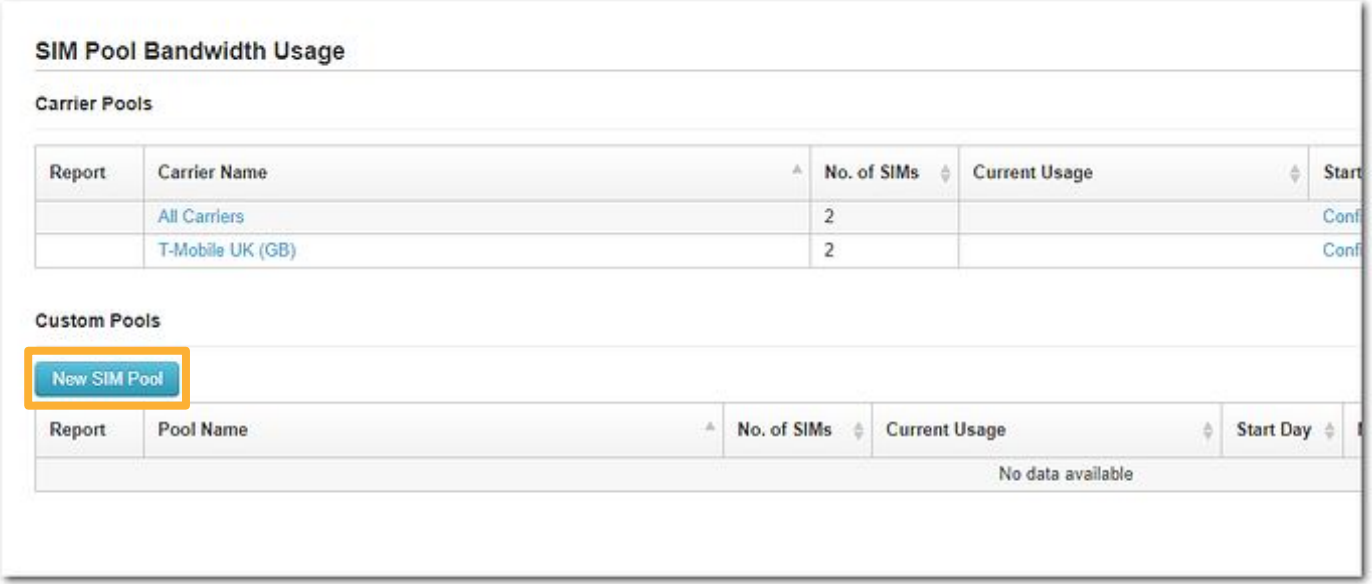


InControl 2 - SIM Pooling

Configuration

Default **SIM** carrier pools for **All Carriers** and **Individual Carriers** are here -

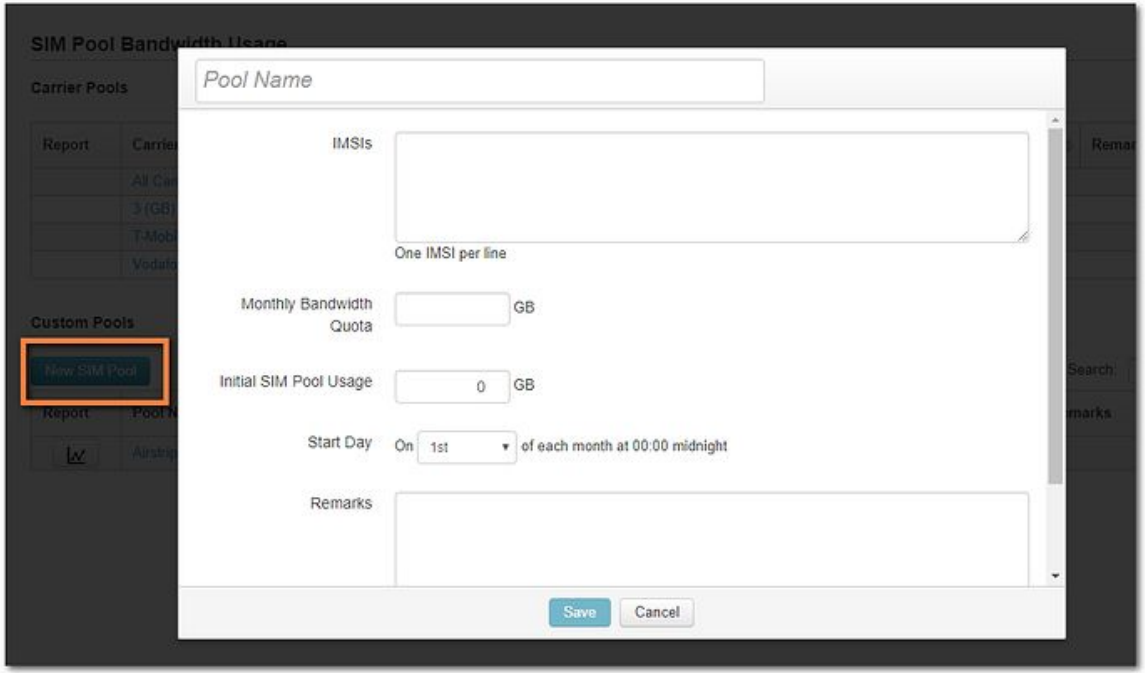
- To add a custom **SIM** pool, click **New SIM Pool**



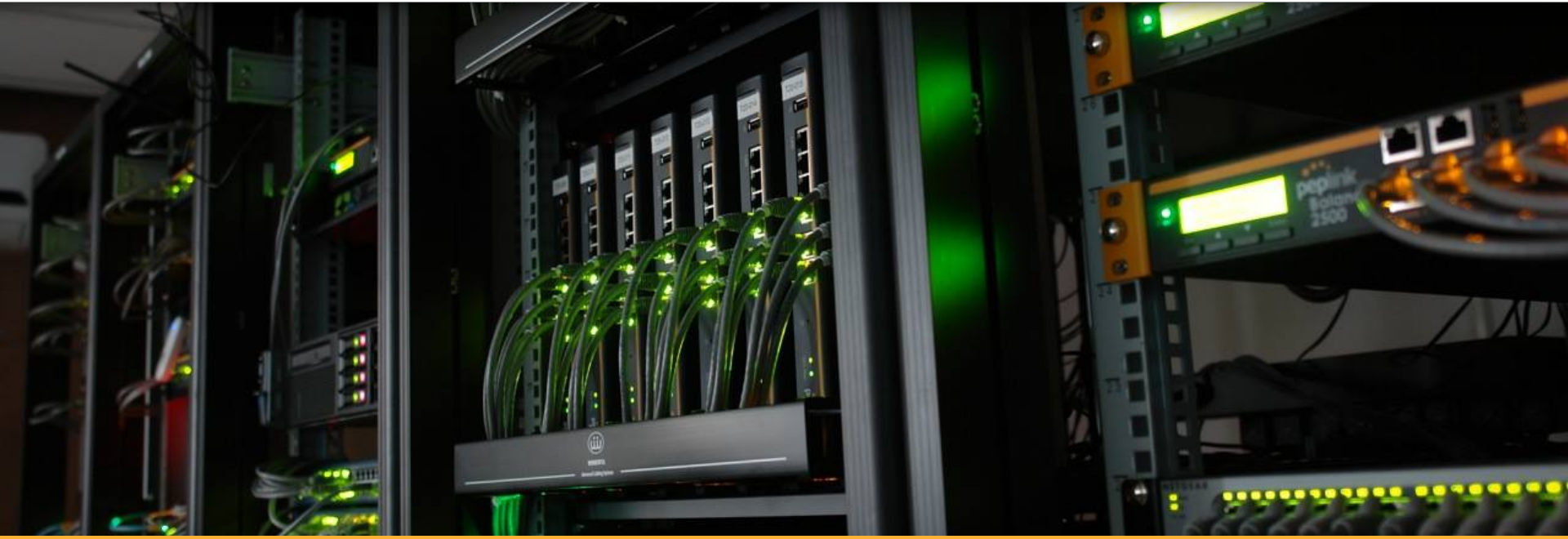
InControl 2 - SIM Pooling

Configuration

2) Fill in the applicable information for the new **Pool**



peplink

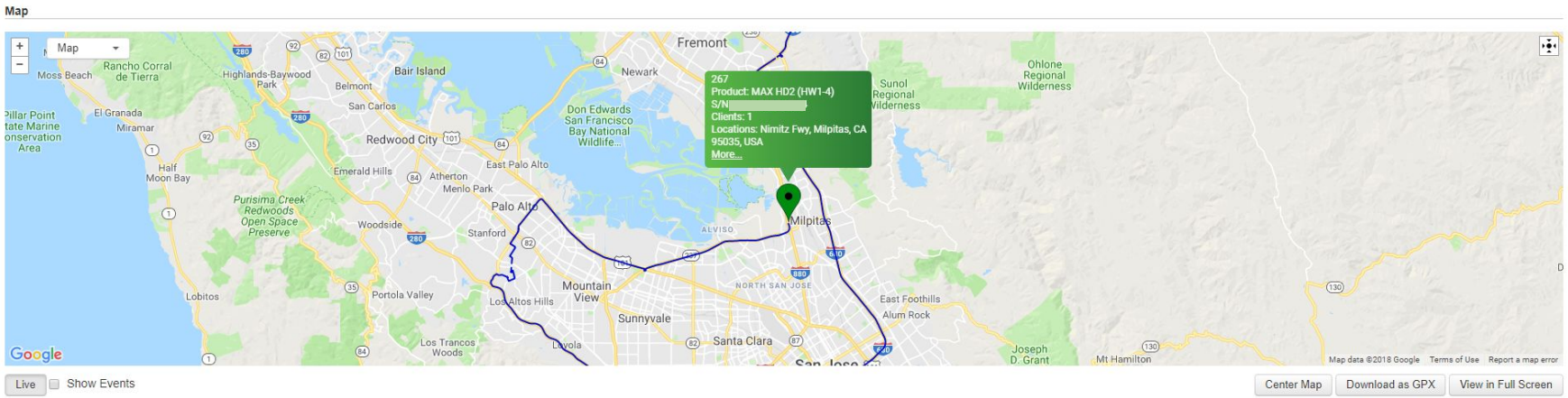


InControl 2 - GPS

InControl 2 - GPS

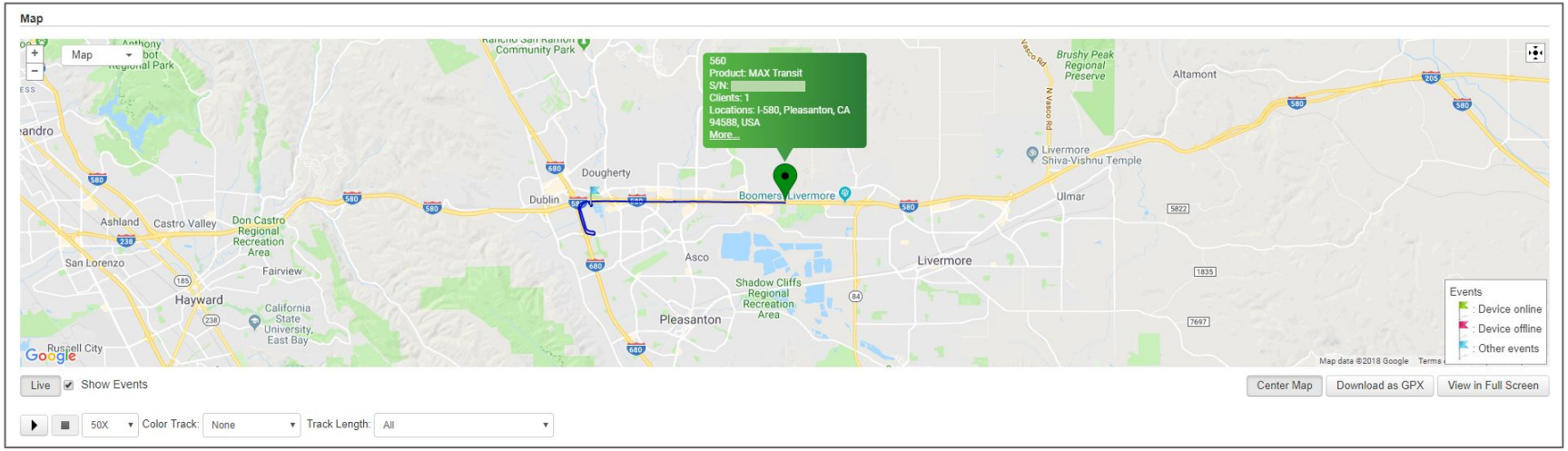
Cloud based Monitoring and Management

InControl 2 provides full-fleet device management when used in combination with our vehicle-mounted, GPS–enabled devices, such as the MAX HD2 and BR1. Track locations using our interactive maps, check vehicle speed, cellular coverage, and traffic conditions. Play back route histories in real-time.



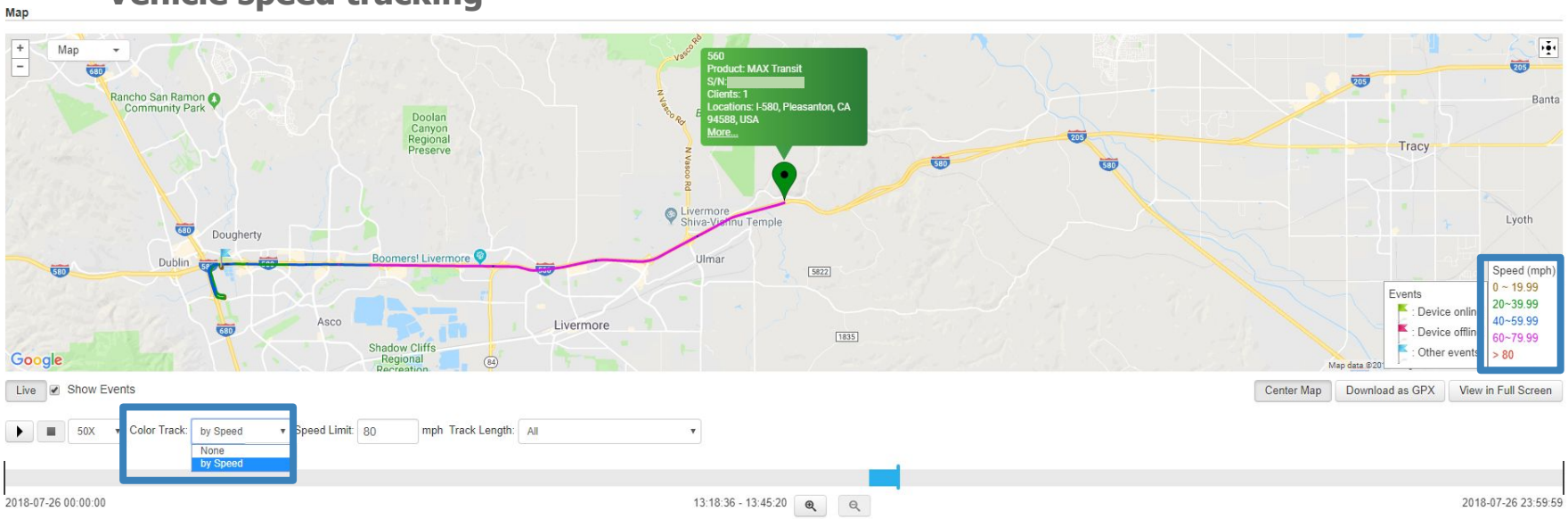
Incontrol 2 - GPS Data playback

- Group Level Dashboard > Click on applicable unit icon
  - ***"More"* option** will link to **Device Level Dashboard**
- Playback historical route information or review in real-time
- Download as .GPX file for 3rd party app usage



InControl 2 GPS reporting

Vehicle speed tracking

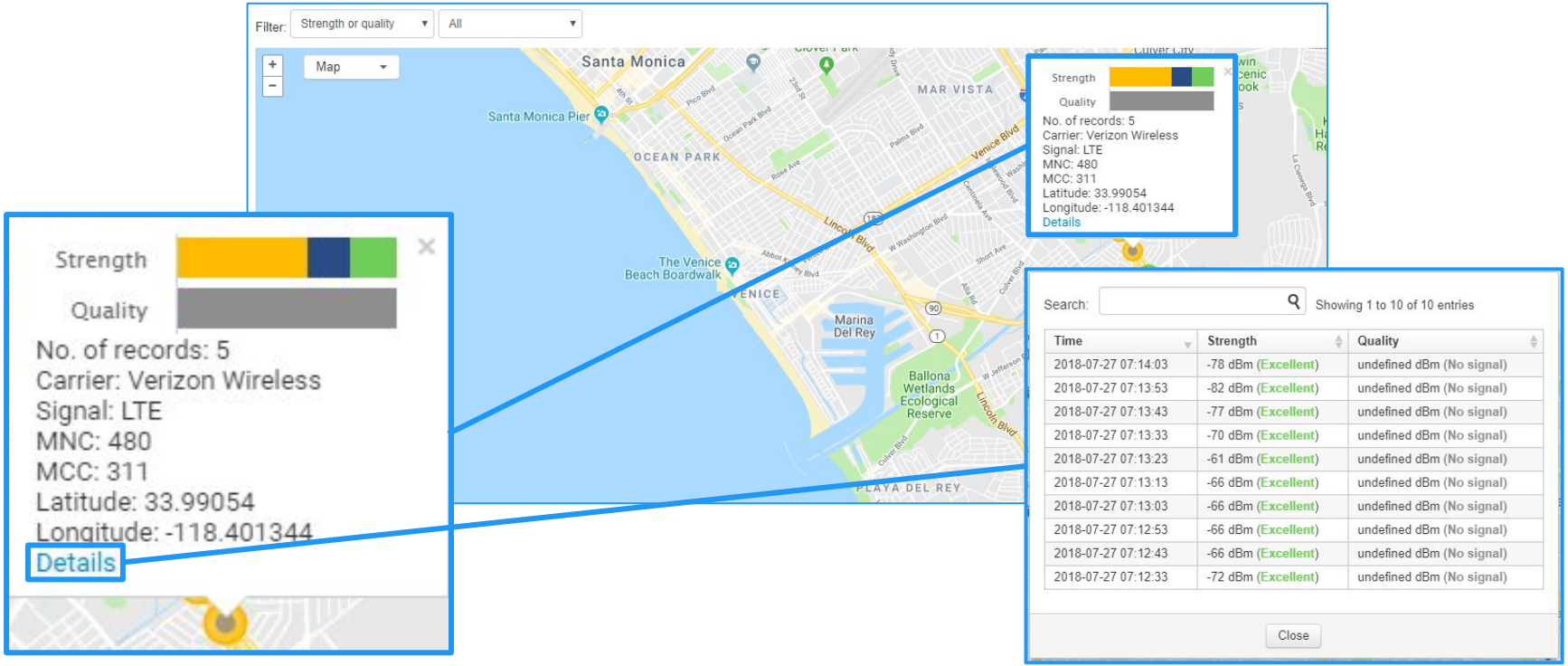


Track vehicle speed along GPS route

- Change "Color Track" to "by Speed"
- Mph is color coded for easy reference

InControl 2 GPS - Cellular coverage

Route Based cell signal strength information



InControl 2 - Geo-Fencing

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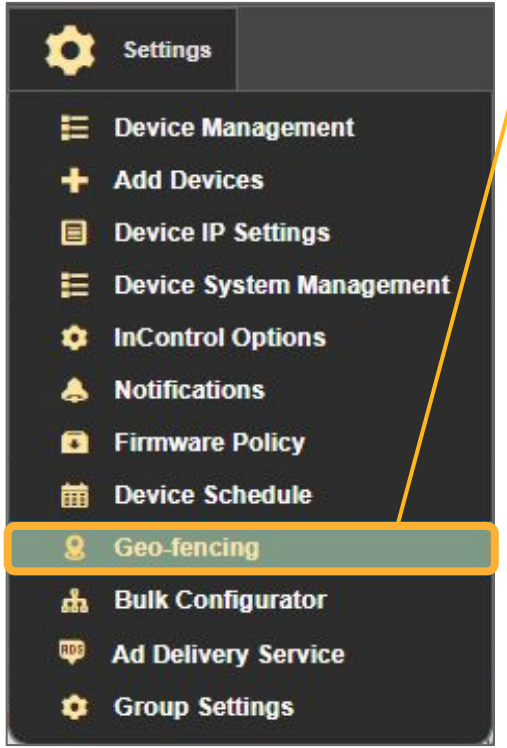
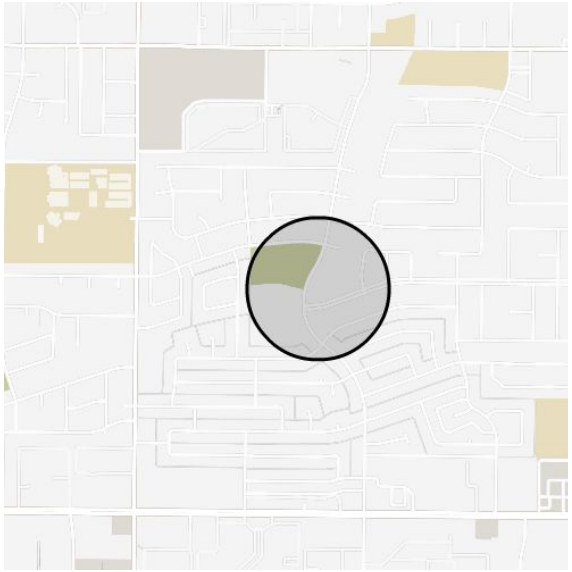
Location based event triggers



Geo-fencing: **InControl 2** allows you to define an area by circle or outline a path on a map; when a device crosses that area, **InControl 2** can trigger an action item



Requirements:

- GPS enabled **Peplink**
  - **HD or BR series**
- Current firmware installed
- Active **InControl 2** account

Configuration:

- **Group Level**
  - **Settings**
  - **Geo-fencing**

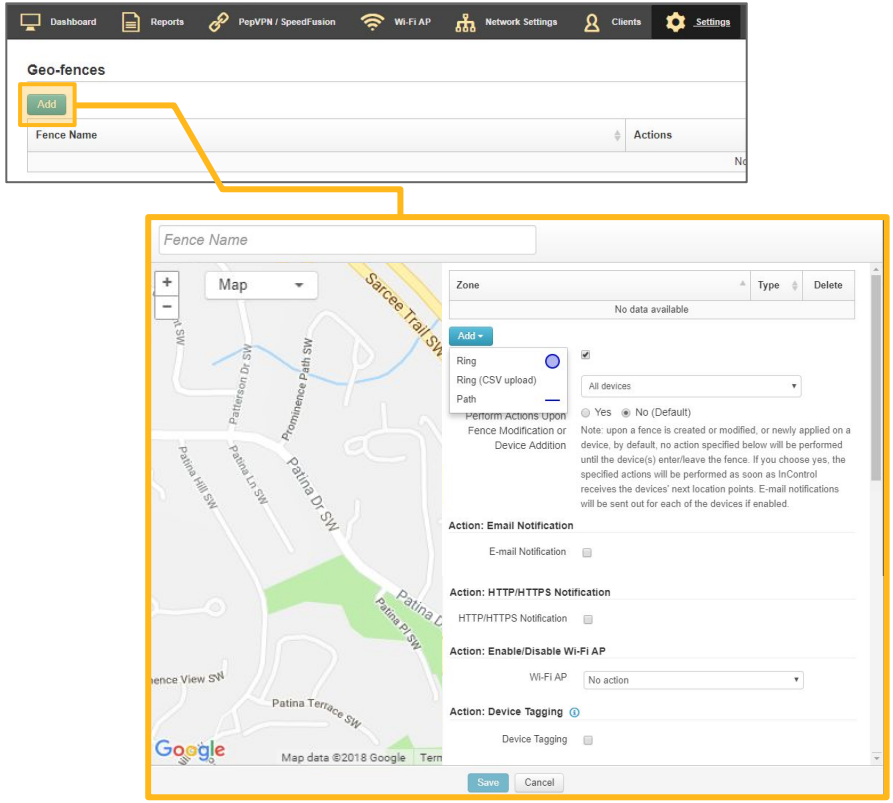
InControl 2: Geo-Fencing

Option: Ring

RING: Manually define an area on the map to fence

Options:

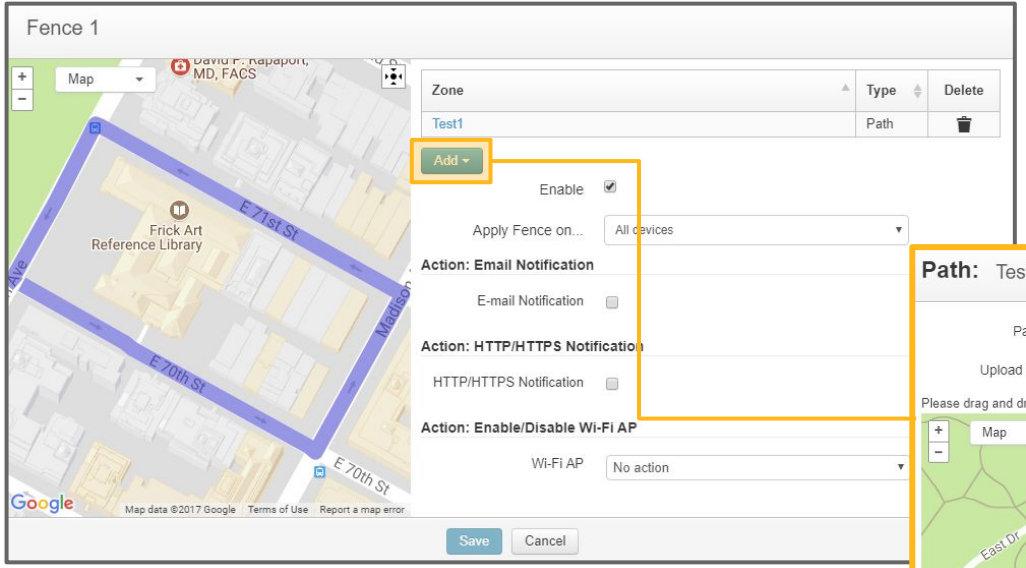
1. Drawing Tool in InControl 2
2. **NEW:** Upload a .CSV file with fence information
   - **Fence info needed**: name, latitude, longitude and radius (in meters)



NOTE: A Geo-Fence can be applied to all units in a Group or selectively via Tags

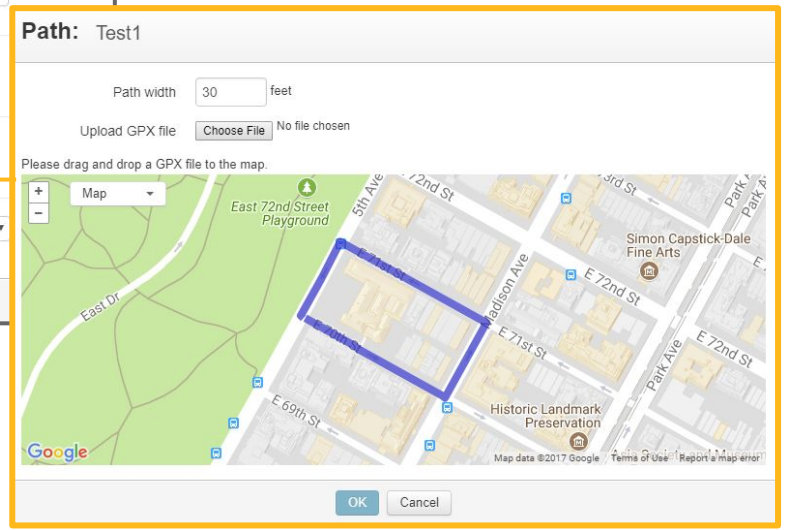
InControl 2: Geo-fencing

Option: Path



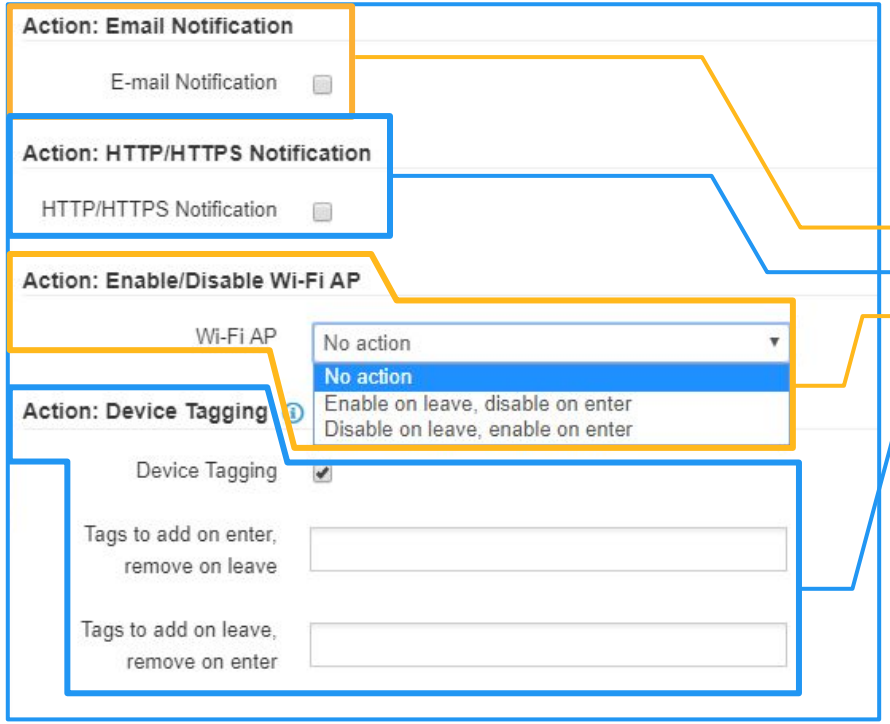
PATH: Upload **.GPX** file to define the route/path

NOTE: A Geo-Fence can be applied to all units in a Group or selectively via Tags



InControl 2: Geo-fencing

Triggered Events



When a GPS-enabled Peplink leaves a Geo-fenced area, these actions can trigger:

- **Email** notification
- **HTTP/HTTPS** notification
- **Enable/Disable** the built in Wi-Fi AP (BR/HD series)
- **GeoSplitting** adding a temporary Tag when crossing into a GeoFence and have it removed upon leaving. This makes Tag enabled actions keyed to a physical location


Q
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