



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

Global Brand

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



Small, Passionate Team

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

Direct Communication

- **[Forum.peplink.com](https://forum.peplink.com)**
- Have direct communication with partners and end-users
- Dynamic and passionate team members stand ready

Recognized by Gartner

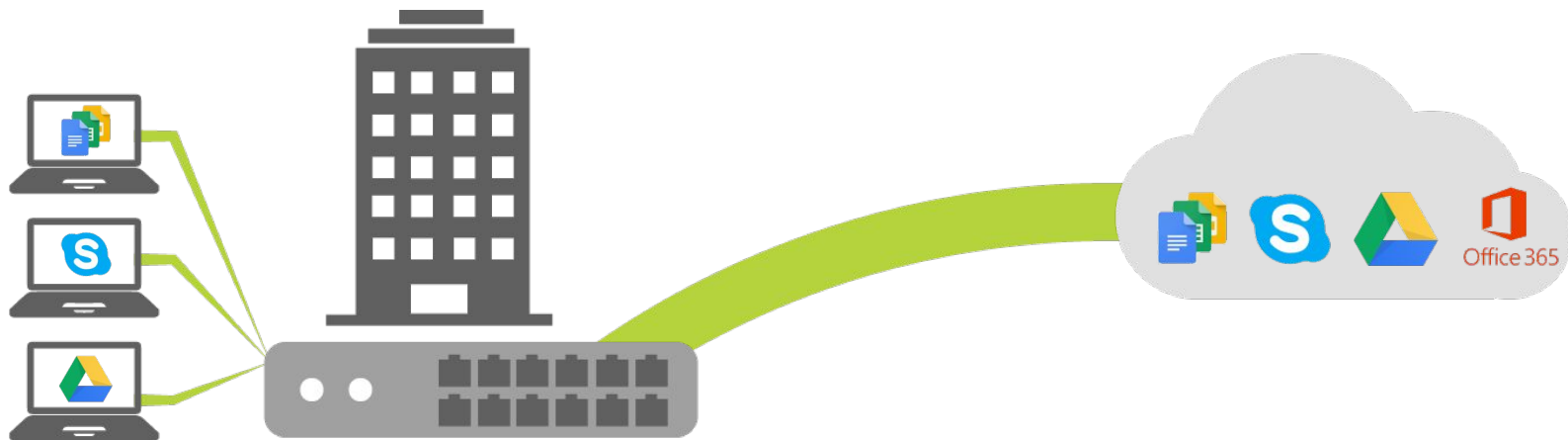


Gartner's report shines a light on the brightest and most capable companies, and Peplink's expertise has earned us a spot on this prestigious report.



Peplink Advantages

Unbreakable Connectivity

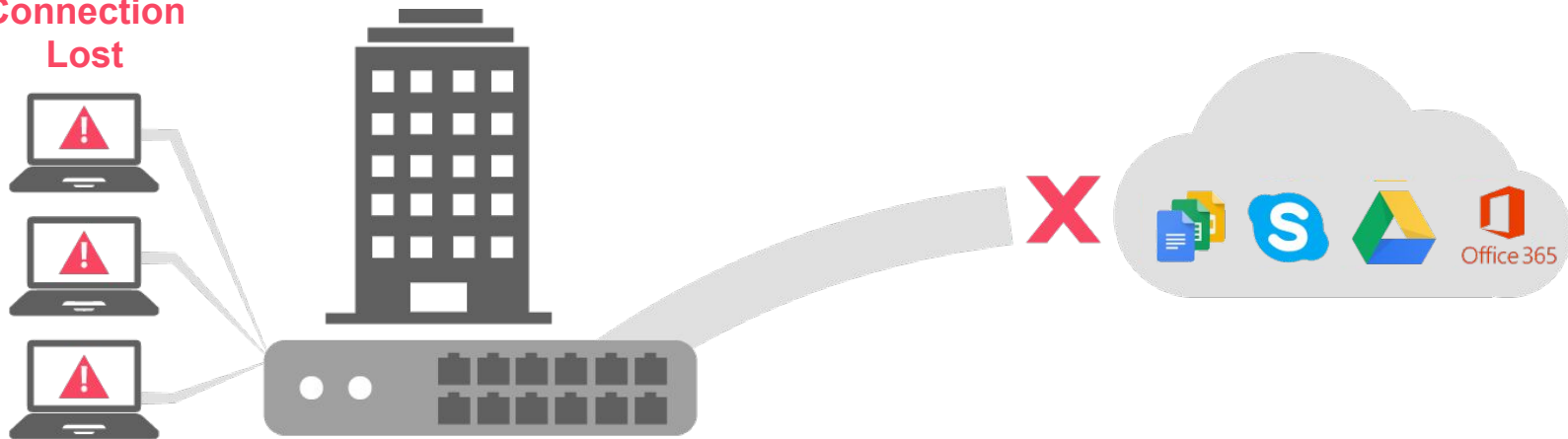


Your cloud apps require constant connectivity.

Unbreakable Connectivity

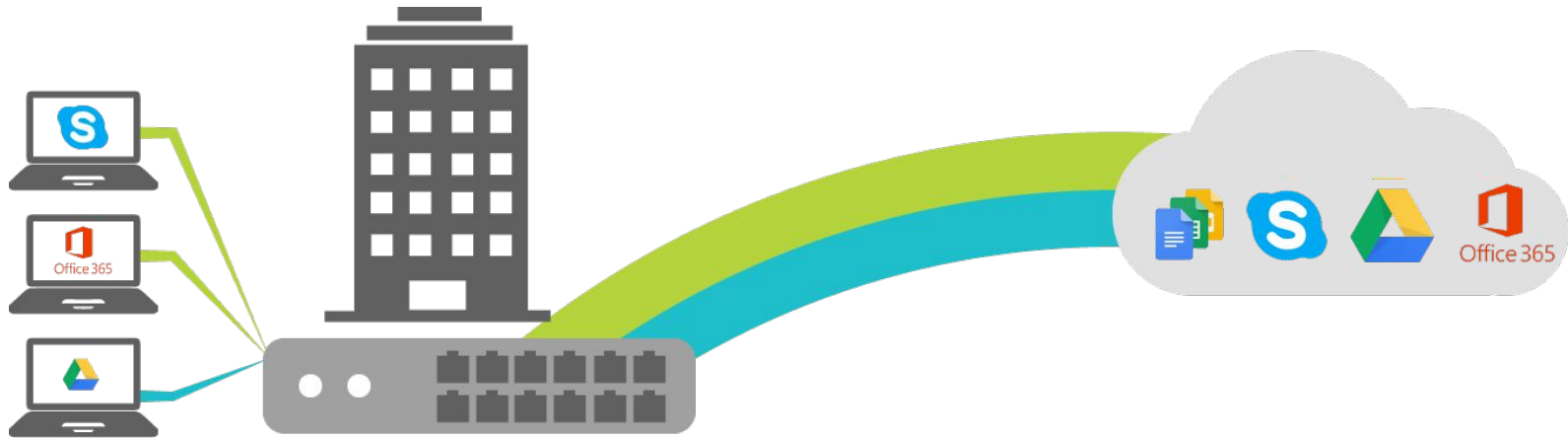


Connection
Lost



If you connection goes down, your office stops working.

Unbreakable Connectivity

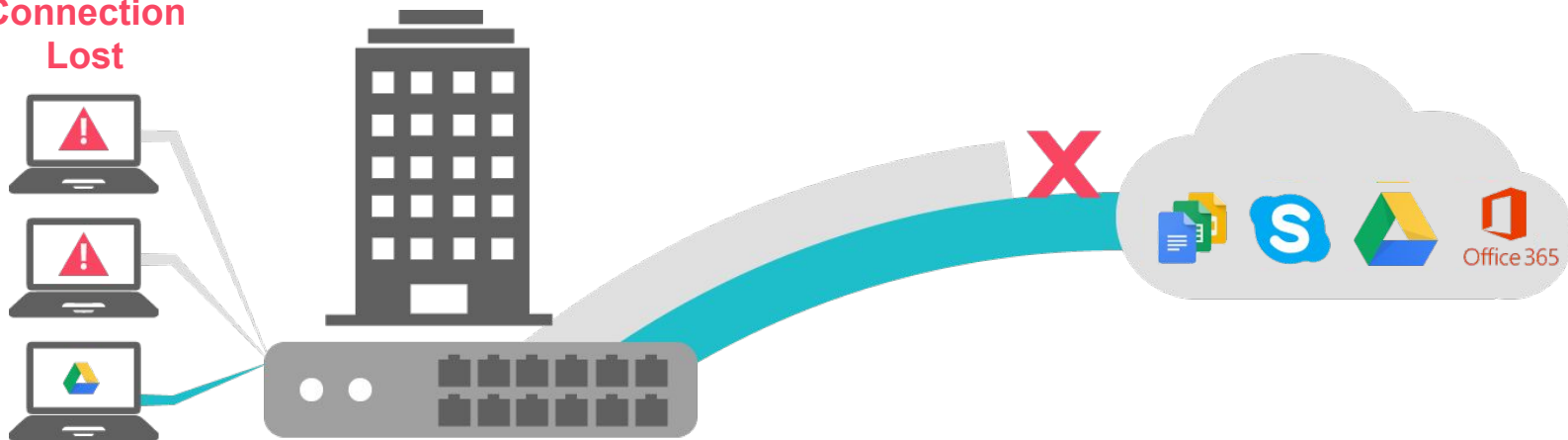


Even if you connect multiple WAN lines...

Unbreakable Connectivity



Connection
Lost



...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



No Effect



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



VS

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

Affordable Connectivity



Private Line: 99.999%

vs

DSL: 98%

DSL: 98%

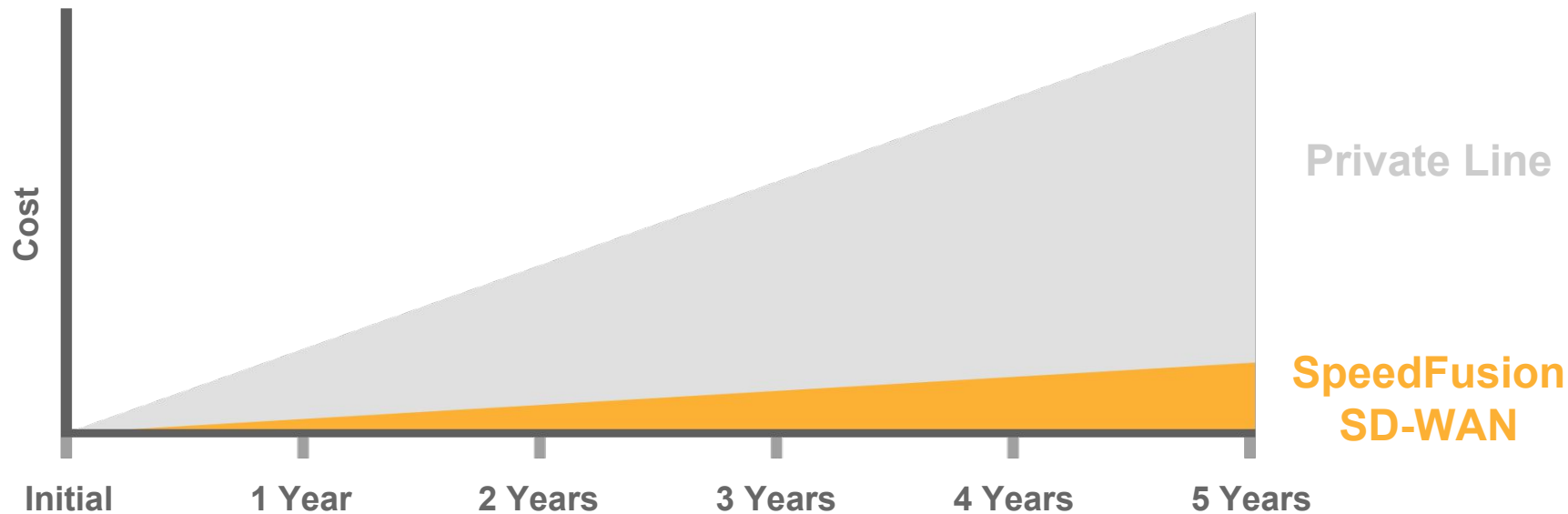
DSL: 98%



99.999%

99.999% reliability is achieved through bandwidth bonding.

Affordable Connectivity



Over time, those cost savings can add up!

Sample Clients



Integrated Logistics | Supply Chain Solutions

50%
Saved



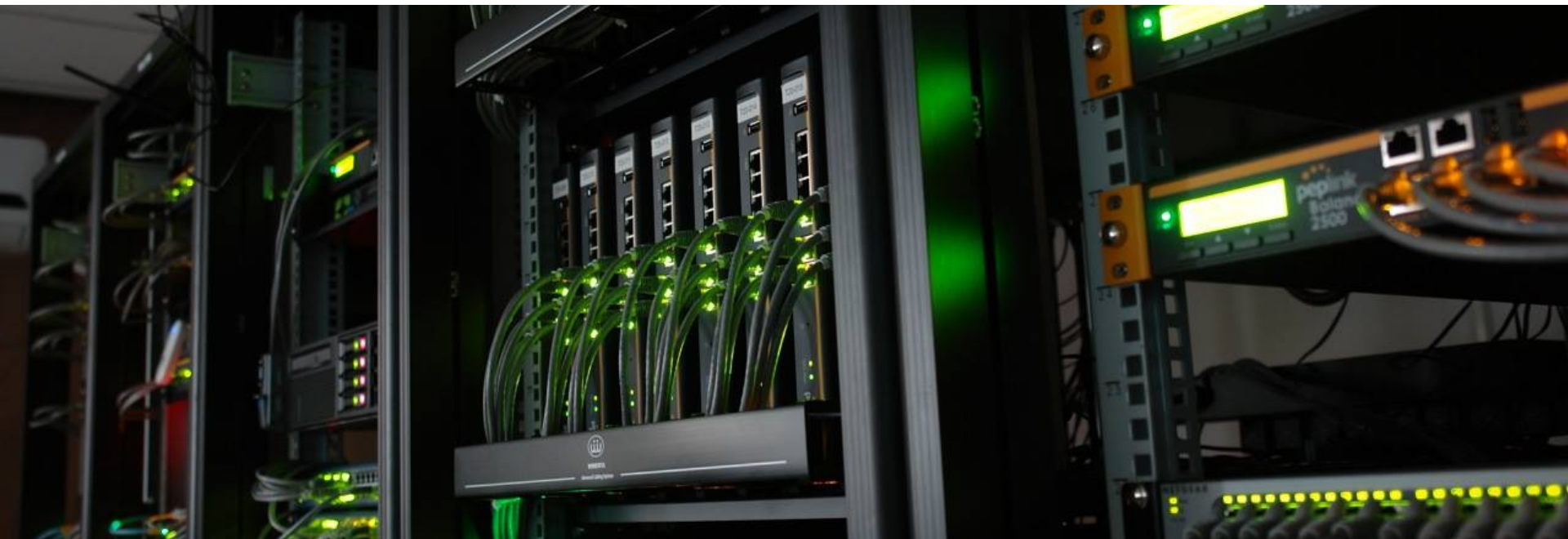
92%
Saved



85%
Saved



67%
Saved



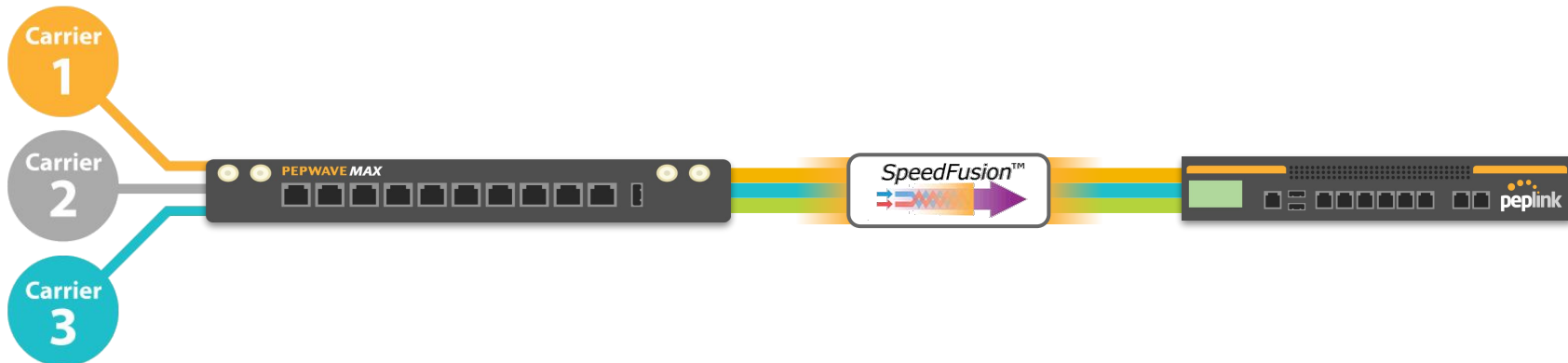
Peplink Training - Tech

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

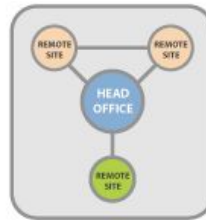
- **Public IP on at least 1x WAN connection**

- 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

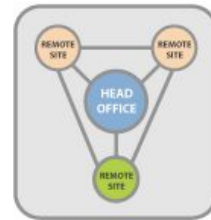
- **Multiple Configuration Types**



Point to Point



Star
(Point to Multi-Point)



Full Mesh

- **Multiple Deployment/Setup Methods**



Peplink UI

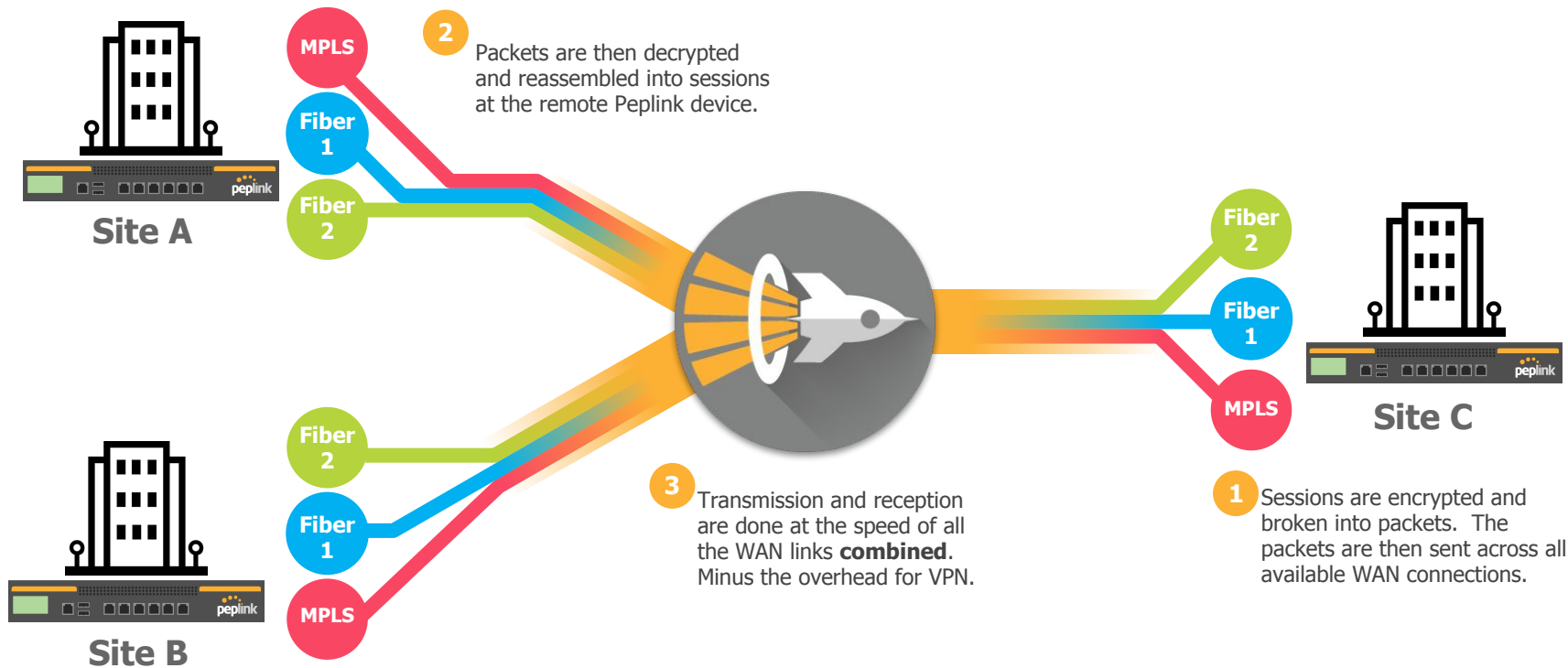
OR



Zero-Touch

SpeedFusion

How it works



Peplink's SD-WAN: SpeedFusion



Core Technologies

WAN Smoothing

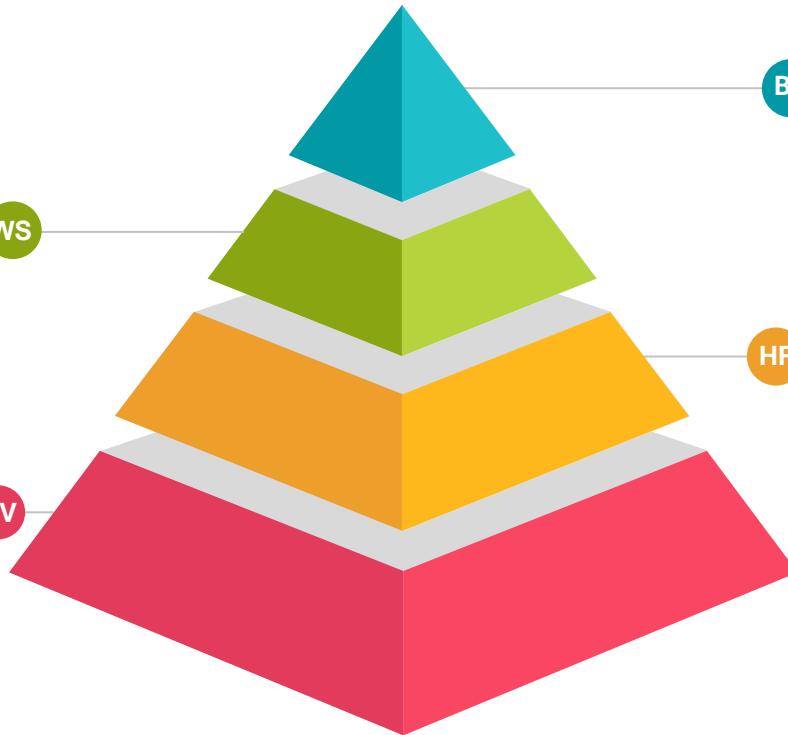
Use multiple WAN connections to create a single, jitter-free data stream.

WS

PepVPN

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

PV



Bandwidth Bonding

BB

Combine the speed and bandwidth of multiple WAN connections.

Hot Failover

HF

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

SpeedFusion: Hot Failover

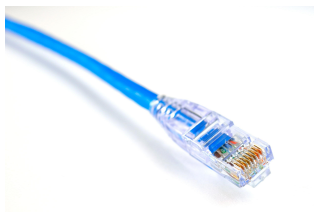


Enables you to change connections while keeping your session intact.

Verticals and applications that benefit from Hot Failover:



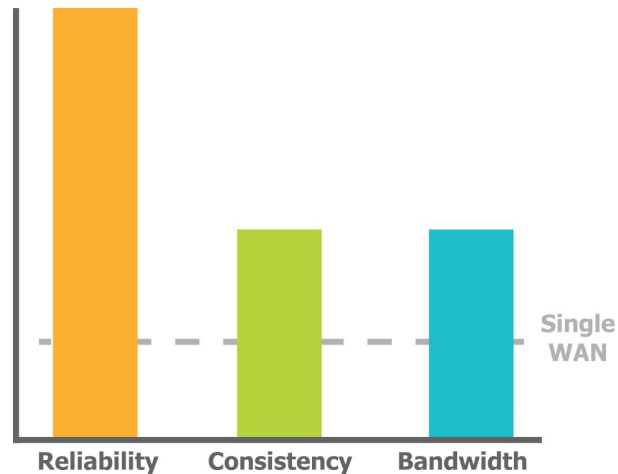
Small Offices



Long-Distance Ethernet



Retail Connectivity



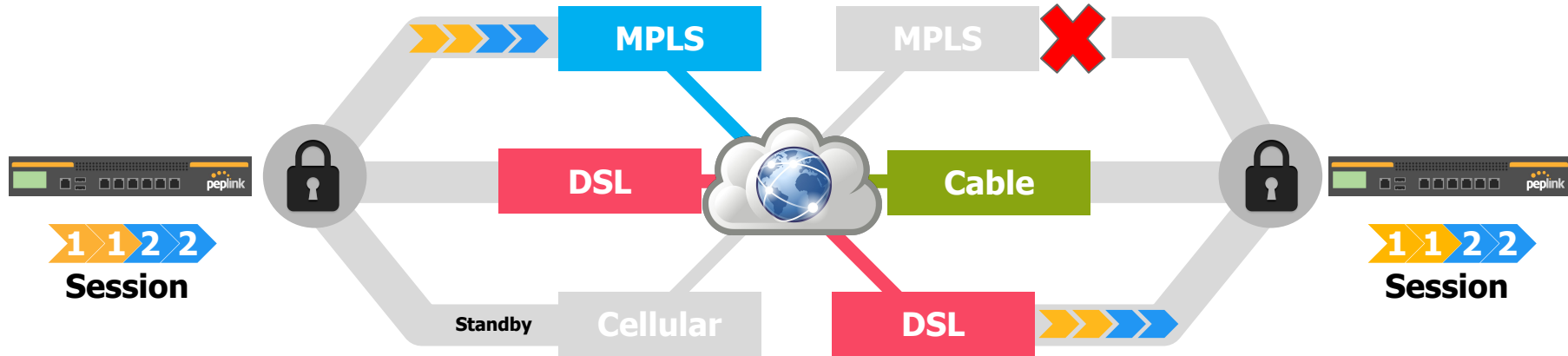
Useful for deployments where you need reliability while keeping costs down.

SpeedFusion: Hot Failover

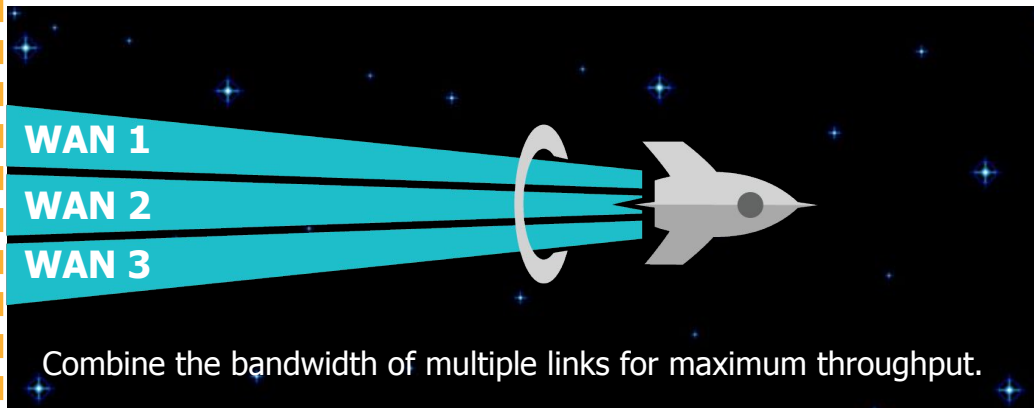


How it works

- 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**



Verticals and applications that benefit from Bandwidth Bonding:



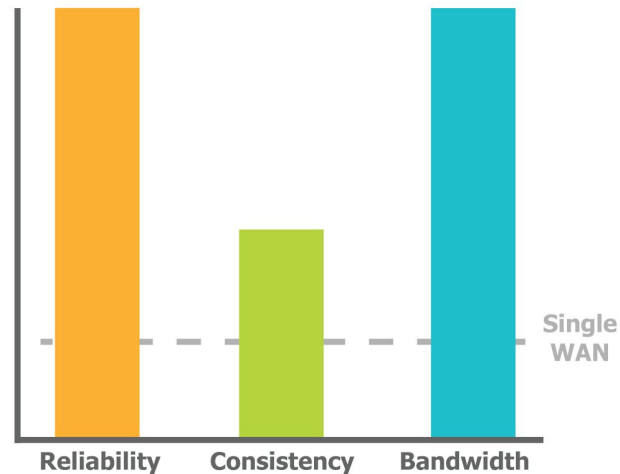
MPLS Alternative



Remote Surveillance



In-Vehicle Connectivity



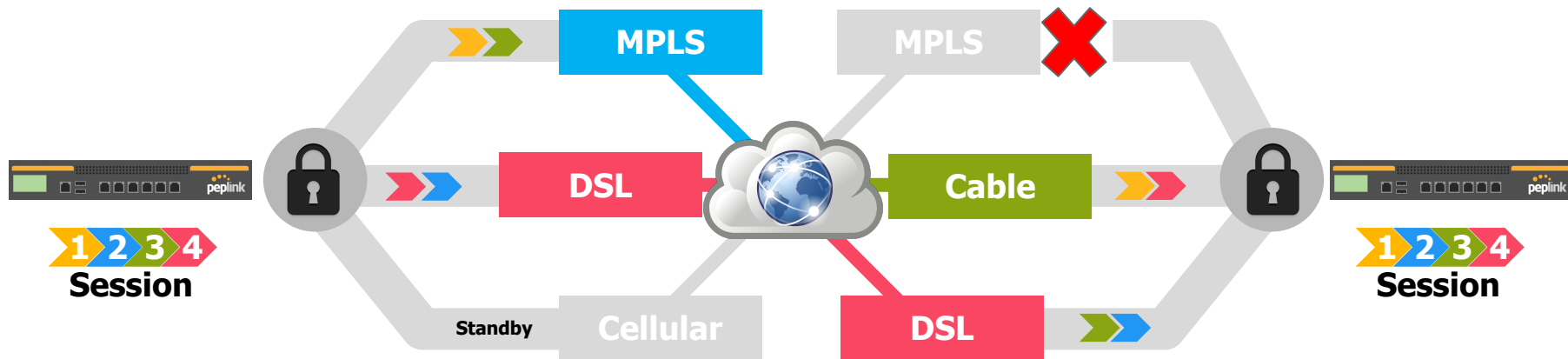
Useful for deployments where you need as much speed as you can get.

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:



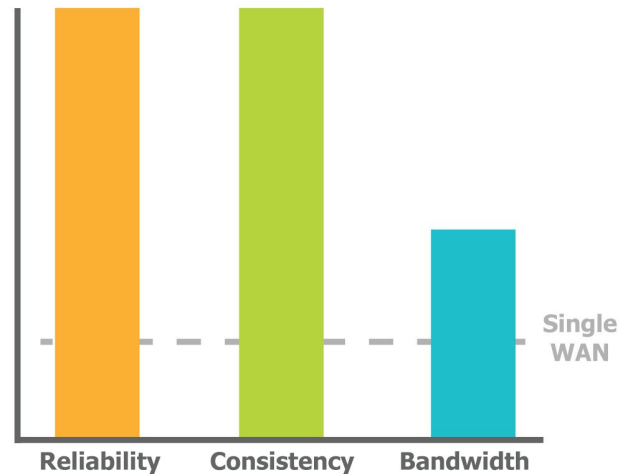
VoIP



Videoconferencing



TV and Radio Broadcasts



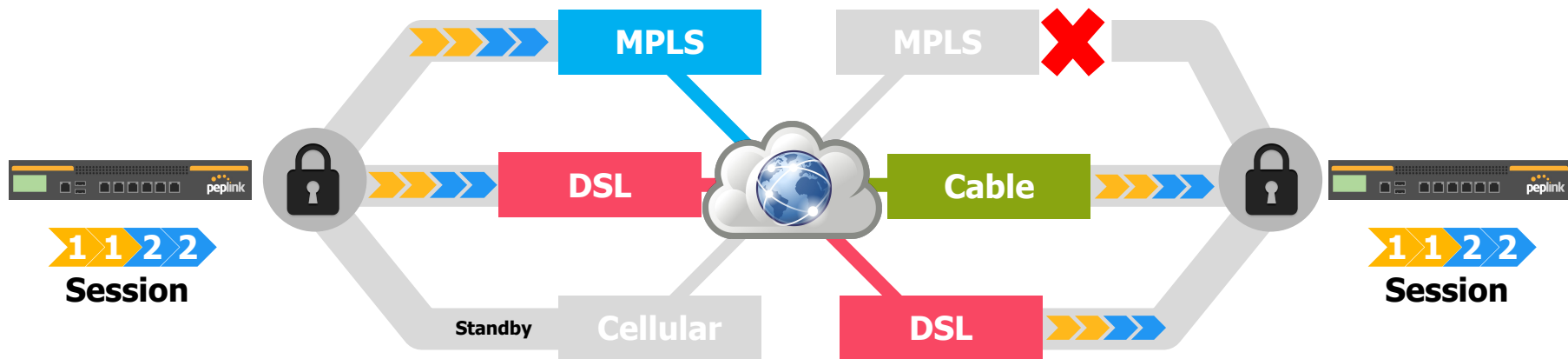
Useful for deployments where improving consistency is more important than improving bandwidth.

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



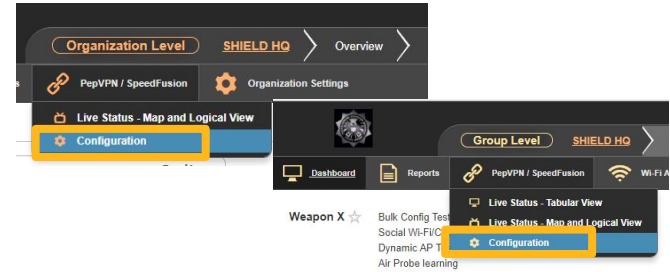
Organization or Group Level:

1. PepVPN/SpeedFusion

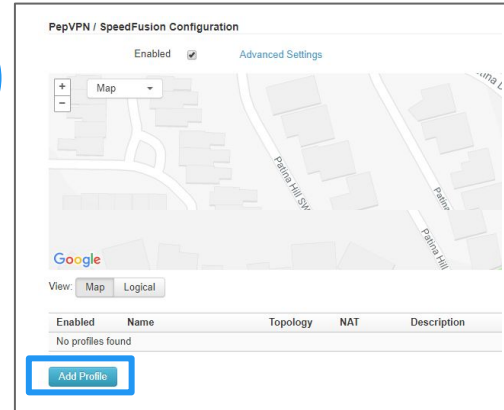
a. Configuration

2. Add Profile

1)



2)



SpeedFusion Configuration

InControl 2



Topology

Please choose the topology you want to create:

- ☒ Star
- ☐ Fully Meshed
- ☐ Point-To-Point

Cancel Next

Hub Devices

Group: Helicarrier

Device: Balance_862C: 30 connection(s) available

Product: Peplink Balance 380 (HW6)

Hub device IP Addresses / Host Names: 208.107.91.83

DNS Resolver 1: Optional

DNS Resolver 2: Optional

Use Them Primarily: ☐

Disaster Recovery: ☐

☒ Show advanced settings

End Point Devices

Selected 0 devices

Search:

Status	Device Name	Group	Tags	Product Name
<input checked="" type="checkbox"/>	Asgard_Embassy	Asgard Embassy		Peplink Balance 210 (HW4)
<input checked="" type="checkbox"/>	Balance_F431	Asgard Embassy		Peplink Balance 210 (HW4)
<input checked="" type="checkbox"/>	MAX_HD4_483F	Weapon X		Pepwave MAX HD4
<input checked="" type="checkbox"/>	MAX_HD4_D40C	Weapon X		Pepwave MAX HD4
<input checked="" type="checkbox"/>	SURF_SOHO_M4CE	Avengers Mansion		Pepwave Surf SOHO MK3
<input checked="" type="checkbox"/>	weapon x	Avengers Mansion		Pepwave MAX Transit (single cellular)

Showing 1 to 6 of 6 entries

☒ Show advanced settings

Add Device Cancel Previous Next

Choose Devices

Selected 3 devices: MAX_TSTDUDU_1D92_ERIC, Balance_DDCD_ERIC, MAX_HD4_37A4_ERIC

Search:

Status	Device Name	Group	Tags	Product Name
<input checked="" type="checkbox"/>	MAX_TSTDUDU_1D92_ERIC	Office		Pepwave MAX Transit
<input checked="" type="checkbox"/>	Balance_DDCD_ERIC	Office		Peplink Balance 210 (HW2.3)
<input checked="" type="checkbox"/>	MAX_HD4_37A4_ERIC	Office		Pepwave MAX HD4
<input type="checkbox"/>	Balance_B468_ERIC	Office		Peplink Balance One
<input type="checkbox"/>	MAX700_CCC3	Office		Pepwave MAX 700 (HW1.2)
<input type="checkbox"/>	SURF_SOHO_DC23	Office		Pepwave Surf SOHO MK3
<input type="checkbox"/>	MAX_HD2_8B29	Office		Pepwave MAX HD2 (HW1-4)
<input type="checkbox"/>	MAX_BR1_0352_ERIC	Car tracking		Pepwave MAX BR1 (HW2)

Cancel Previous Next

Peer Devices

Selected 2 devices: Helicarrier/B380, Heimdall/MFA200

Search:

Status	Device Name	Group	Tags	Product Name
<input checked="" type="checkbox"/>	Heimdall/MFA200	Asgard Embassy		Peplink MediaFast 200 (HW1)
<input checked="" type="checkbox"/>	Helicarrier/B380	Helicarrier		Peplink Balance 380 (HW6)
<input type="checkbox"/>	Jarvis/BOneC	Avengers Mansion		Peplink Balance One Core
<input type="checkbox"/>	MAX_HD4_151D	Avengers Mansion		Pepwave MAX HD4
<input type="checkbox"/>	weapon x	Weapon X	video	Pepwave MAX Transit (single cellular)

☐ Show advanced settings

Cancel Previous Next

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

A screenshot of the SpeedFusion configuration interface, specifically the 'Hub Devices' section. The interface is divided into two main panels. The top panel, titled 'Hub Devices', contains settings for a primary hub device. It includes a 'Group' dropdown set to 'Asgard Embassy', a 'Device' dropdown set to 'Balance_28C3: 2 connection(s) available', and a 'Product' field set to 'Peplink Balance 210 (HW4)'. Below these are fields for 'Hub device IP Addresses / Host Names' containing '208.107.91.83', and two 'DNS Resolver' fields both set to 'Optional'. A 'Use Them Primarily' checkbox is unchecked. The bottom panel, which is highlighted with an orange border, is titled 'Disaster Recovery' and has a checked checkbox. It contains identical settings to the top panel: 'Group' set to 'Asgard Embassy', 'Slave Device' dropdown set to 'Balance_F431: 2 connection(s) available', 'Product' field set to 'Peplink Balance 210 (HW4)', 'Hub device IP Addresses / Host Names' containing '208.107.91.83', and two 'DNS Resolver' fields both set to 'Optional'. A 'Use Them Primarily' checkbox is also present and unchecked. At the bottom of the interface, there is a checkbox labeled 'Show advanced settings' which is checked.

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
☐ 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

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

Advanced WAN Settings

Search:

First Previous 1 Next Last

Device	SpeedFusion	Remote Device	WAN Connection Priority
<input type="checkbox"/> Heimdal/MFA200	No	Helicarrier/B380	WAN 1 1; WAN 2 2; Mobile Internet 3;
<input type="checkbox"/> Heimdal/MFA200	No	weapon x	WAN 1 1; WAN 2 2; Mobile Internet 3;
<input type="checkbox"/> Helicarrier/B380	Yes	Heimdal/MFA200	WAN 1 1; WAN 2 1; WAN 3 1; Mobile Internet 1;
<input type="checkbox"/> Helicarrier/B380	Yes	Heimdal/MFA200	WAN 1 1; WAN 2 1; WAN 3 1; Mobile Internet 1;
<input type="checkbox"/> Jarvis/BOneC	No		
<input type="checkbox"/> MAX_HD4_151D	Yes		
<input type="checkbox"/> MAX_HD4_151D	Yes		
<input type="checkbox"/> weapon x	No		
<input type="checkbox"/> 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

InControl 2: PepVPN/SpeedFusion



Complete Profile and Save

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

The screenshot displays the InControl 2 interface. At the top, a world map shows a green mesh topology connecting several locations: London, Paris, Frankfurt, Amsterdam, Berlin, Rome, Athens, Istanbul, Moscow, Beijing, Shanghai, Tokyo, Seoul, Taipei, Hong Kong, Singapore, Bangkok, Jakarta, Sydney, Melbourne, and Auckland. Below the map, there is a table with the following columns: Enabled, Profile, Topology, Description, NAT, and Actions.

Enabled	Profile	Topology	Description	NAT	Actions
<input checked="" type="checkbox"/>	New Profile	Fully Meshed	End Points: MAX_TSTDUO_1D92_ERIC , Balance_DDCD_ERIC , MAX_HD4_37A4_ERIC	No	Edit Delete

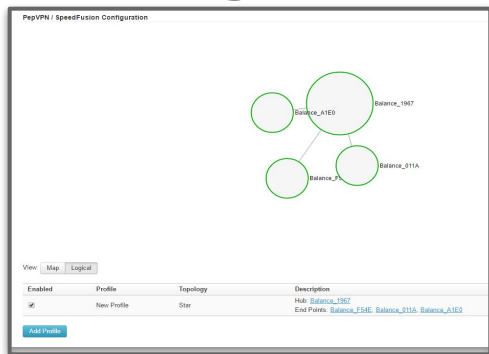
Below the table, there is an "Add Profile" button. At the bottom of the interface, there is a "Save Changes" button and a "Cancel" button.

InControl 2: PepVPN/SpeedFusion

View Status

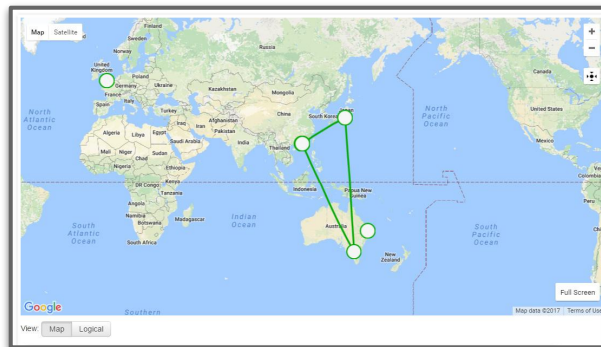


Logical

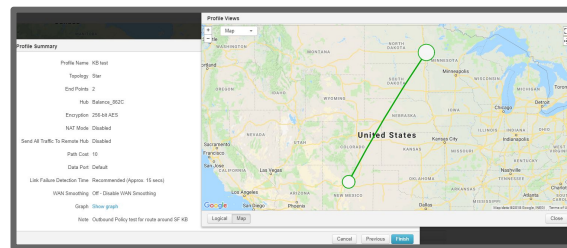
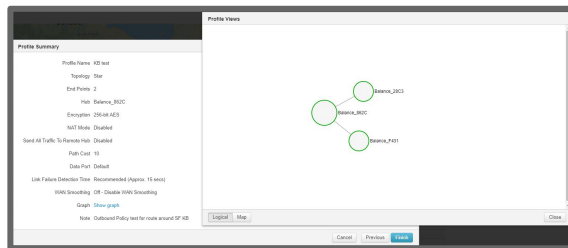


OR

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** -

PepVPN with SpeedFusion



PepVPN

Local ID

Please define a local ID before using the PepVPN. Remote units can identify this unit by this "Local ID", in addition to the serial number.

Save

PepVPN with SpeedFusion

InControl management enabled. Settings can now be configured on [InControl](#).

Profile	Remote ID	Remote Address(es)
No VPN Connection Defined		
New Profile		

Send All Traffic To

No PepVPN profile selected

PepVPN Local ID

Local ID

PepVPN Settings

Link Failure Detection Time ☒ Recommended (Approx. 15 secs)
☐ Fast (Approx. 6 secs)
☐ Faster (Approx. 2 secs)
☐ Extreme (Under 1 sec)
Shorter detection time incurs more health checks and higher bandwidth overhead

Save

- 2) Choose **New Profile** -

SpeedFusion: UI Configuration



Local UI and initial settings

PepVPN with SpeedFusion



InControl management enabled. Settings can now be configured on [InControl](#).

Profile	Remote ID	Remote Address(es)	
test	test	1.1.1.2	
New Profile			

Send All Traffic To

No PepVPN profile selected

PepVPN Local ID

Local ID Balance_E26C

PepVPN Settings

Link Failure Detection Time

- ☒ Recommended (Approx. 15 secs)
- ☐ Fast (Approx. 6 secs)
- ☐ Faster (Approx. 2 secs)
- ☐ Extreme (Under 1 sec)

Shorter detection time incurs more health checks and higher bandwidth overhead

Save

Send All Traffic

Send All Traffic To ? ☐

Save Cancel

Send All Traffic

Send All Traffic To ? ☒ test ▼

DNS Server

8.8.8.8

8.8.4.4

☒ Backup Site

Save Cancel

- 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

The screenshot shows the 'PepVPN Settings' window. It has three main sections: 'Handshake Port' with radio buttons for 'Default' and 'Custom'; 'Backward Compatibility' with radio buttons for 'High (firmware 6.1+)' and 'Restricted (firmware 6.2+)'; and 'Link Failure Detection Time' with radio buttons for 'Recommended (Approx. 15 secs)', 'Fast (Approx. 6 secs)', 'Faster (Approx. 2 secs)', and 'Extreme (Under 1 sec)'. A 'Save' button is at the bottom. A 'Help' icon is in the top right corner. Three callout boxes provide additional information: the first points to the 'Handshake Port' section, the second points to the 'Backward Compatibility' section, and the third points to the 'Link Failure Detection Time' section.

PepVPN Settings	
Handshake Port	<input checked="" type="radio"/> Default <input type="radio"/> Custom
Backward Compatibility	<input checked="" type="radio"/> High (firmware 6.1+) <input type="radio"/> Restricted (firmware 6.2+)
Link Failure Detection Time	<input checked="" type="radio"/> Recommended (Approx. 15 secs) <input type="radio"/> Fast (Approx. 6 secs) <input type="radio"/> Faster (Approx. 2 secs) <input type="radio"/> Extreme (Under 1 sec)
Shorter detection time incurs more health checks and higher bandwidth overhead	
<button>Save</button>	

Help [Close](#)

To customize handshake port (TCP), please click [here](#).

To change backward compatibility option, please click [here](#).

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.

The screenshot shows the SpeedFusion configuration interface. The top section is titled "PepVPN Profile" and contains the following fields:

- Name: [Text input field]
- Active: ☒
- Encryption: ☒ 256-bit AES ☐ OFF
- Authentication: ☒ Remote ID / Pre-shared Key
- Remote ID / Pre-shared Key: [Text input field] [Text input field]
- NAT Mode: ☐
- Remote IP Address / Host Names (Optional): [Text input field]
If this field is empty, this field on the remote unit must be filled
- Cost: [Text input field] 10
- Data Port: ☒ Auto ☐ Custom [Text input field]
- Bandwidth Limit: ☐
- WAN Smoothing: ☐ Off

The bottom section is titled "WAN Connection Priority" and contains a table with 6 rows:

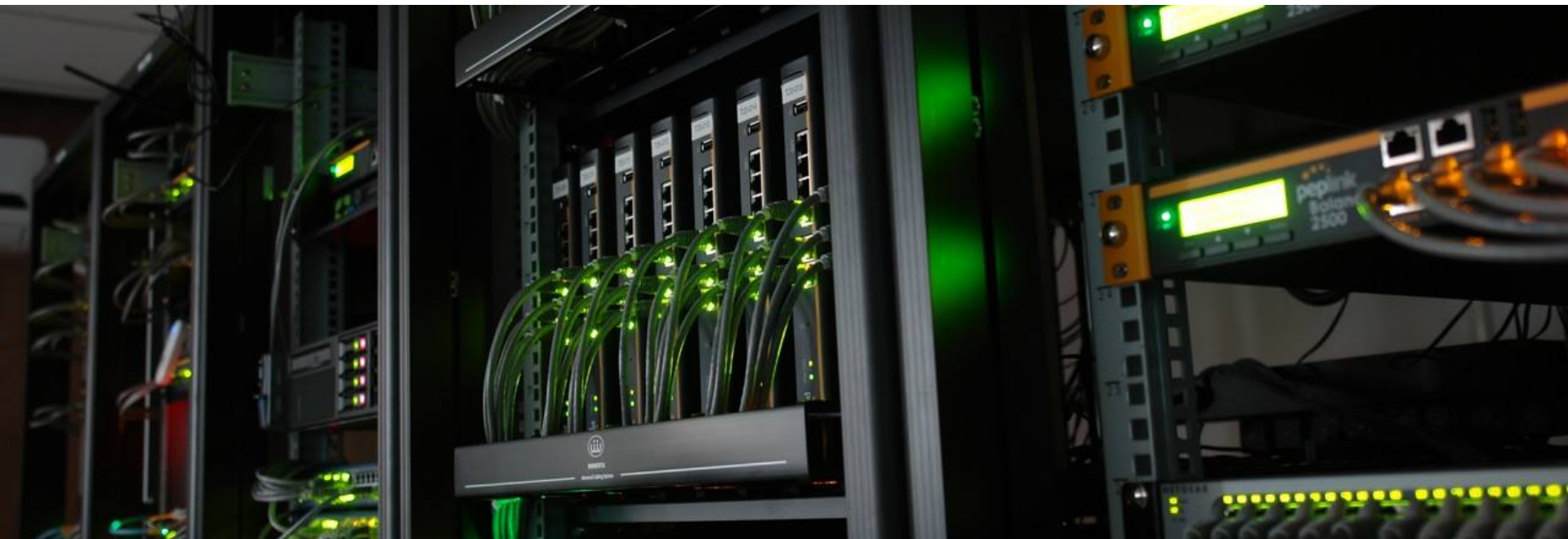
	Priority:
1. WAN 1	1 (Highest)
2. WAN 2	1 (Highest)
3. LAN 1 as WAN	1 (Highest)
4. LAN 2 as WAN	1 (Highest)
5. LAN 3 as WAN	1 (Highest)
6. Mobile Internet	1 (Highest)

At the bottom right of the window are "Save" and "Cancel" buttons.

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.



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.

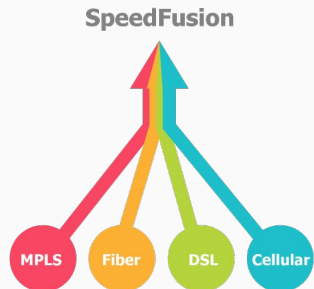


How **SD-WAN** Fits With Peplink?



WAN Virtualization

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



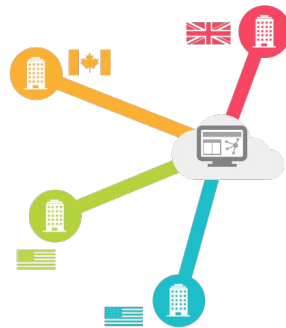
Secure VPN

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



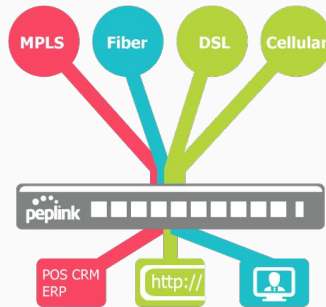
Centrally Managed

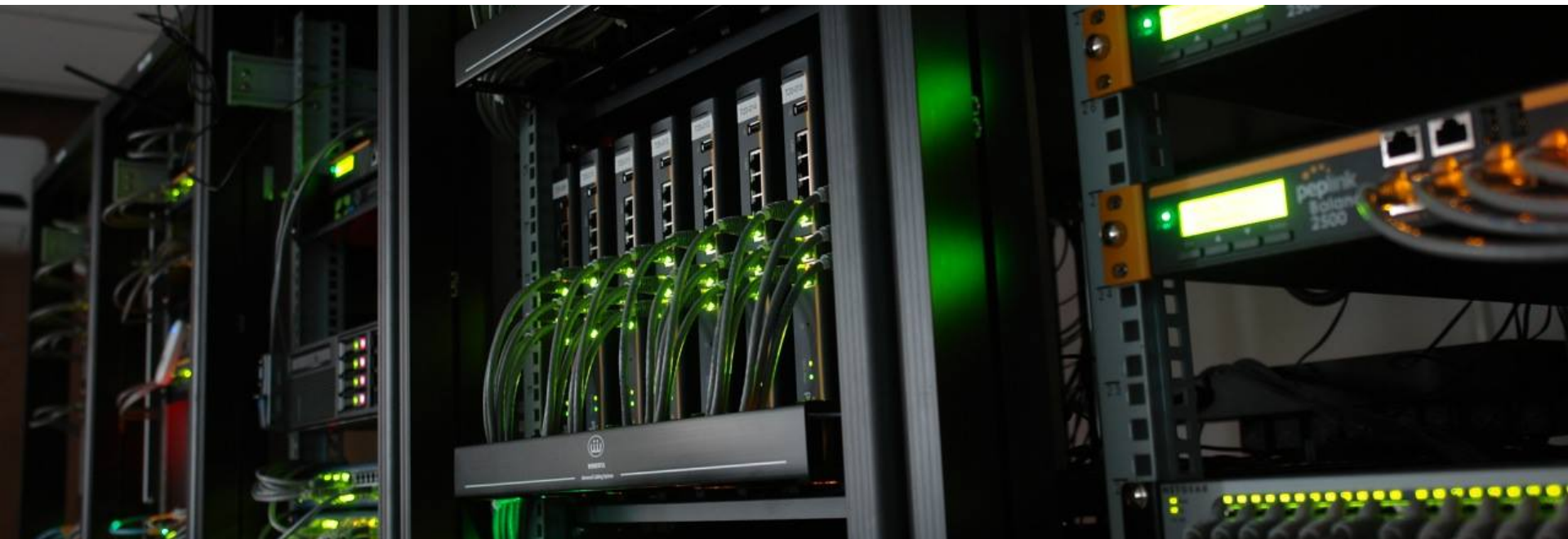
Using InControl 2, network administrators gain full control over their networks using a single interface.



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.



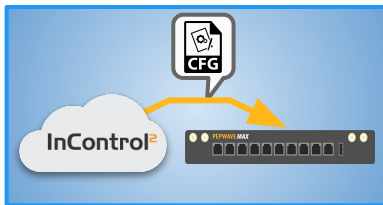
InControl 2: Features



GPS Fleet Tracking

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

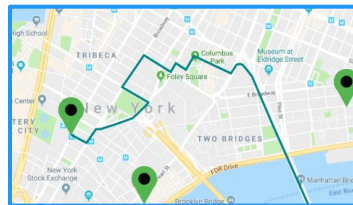
- Embedded Cellular MAX Mobile units compatible
- Customizable to save Data Usage
- Downloadable for use in 3rd party apps
- NMEA or GPX format



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!

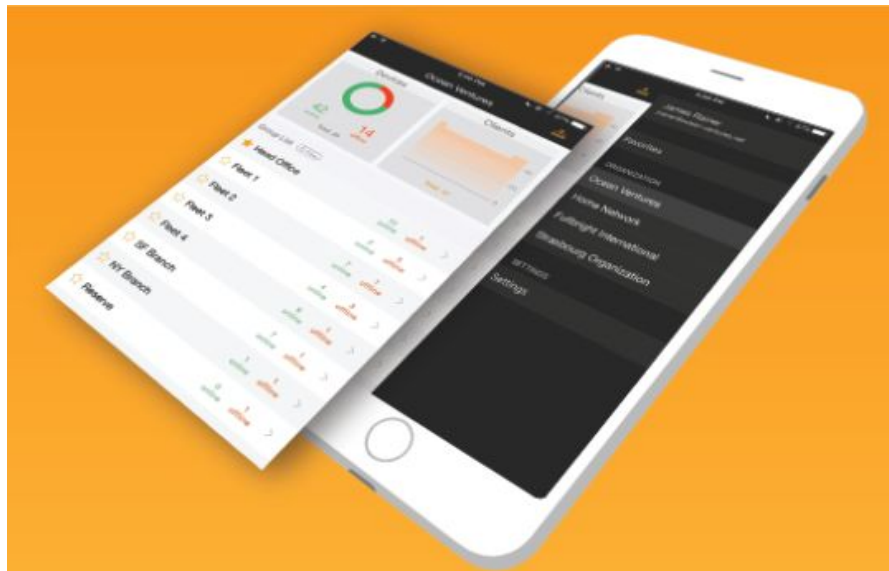
- Firmware **Management**
- Warranty **Monitoring** and renewal
- Configurable and Granular **email alert/notifications**
- Ad Delivery Server
- Get information from Smart Device **Companion App**

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.

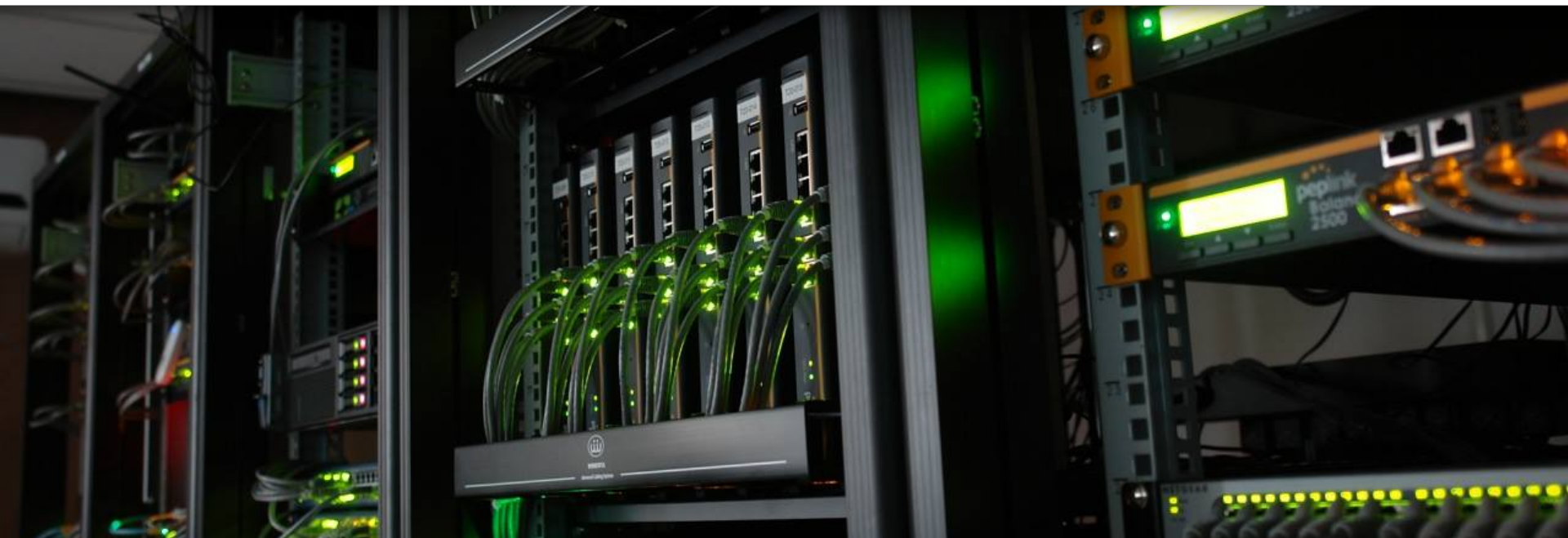
- Save your most commonly accessed groups across all organizations on the **favorite screen**.
- **Check the connection status** of any device, the **clients** they are connected to, and **all activity** affecting the group.
- **Remote Web Admin** to directly access the UI of your Peplink unit
- **iOS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





InControl 2

Initial Account setup



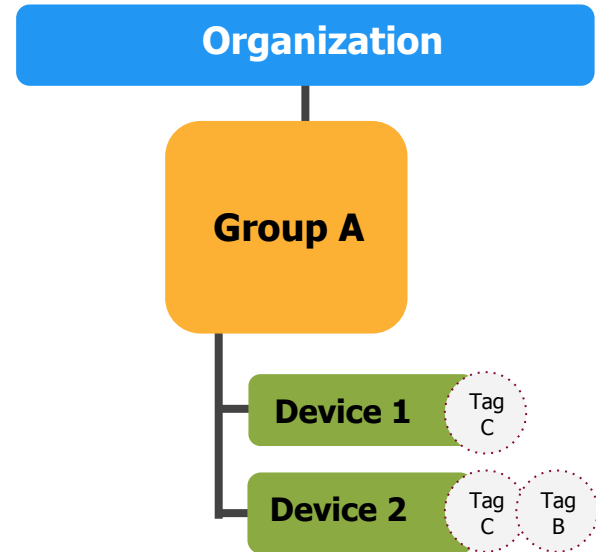
InControl 2 - Overview

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

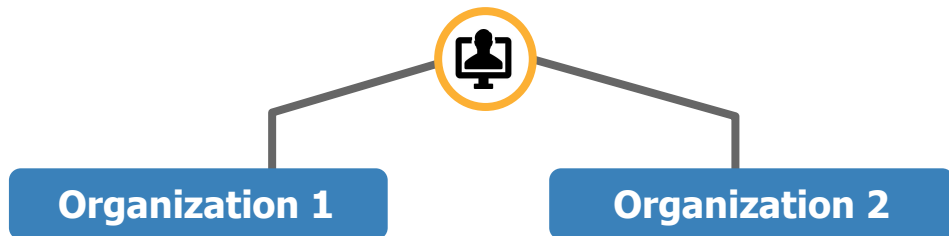


Users

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

InControl 2 Terms

Admin and User definitions and overview

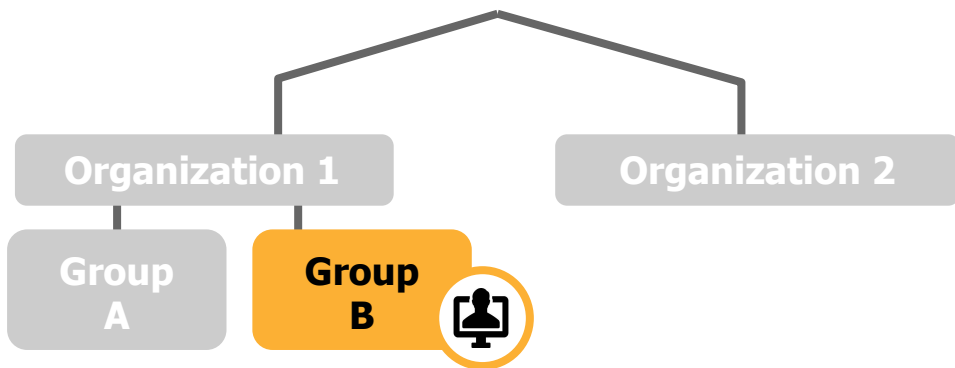


Users

- 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

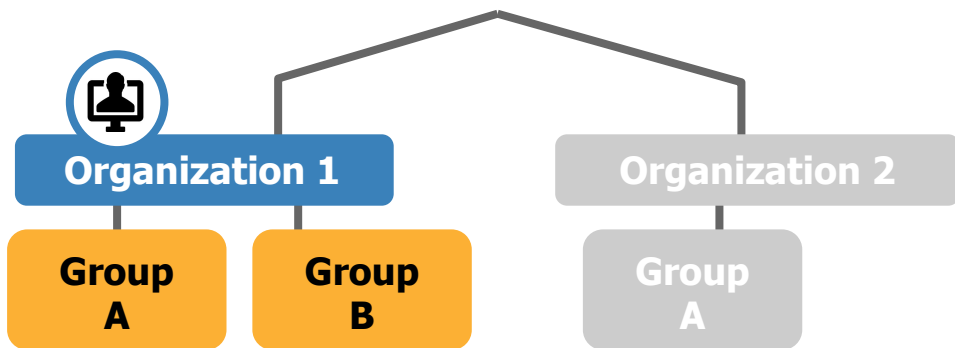


Users

- 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

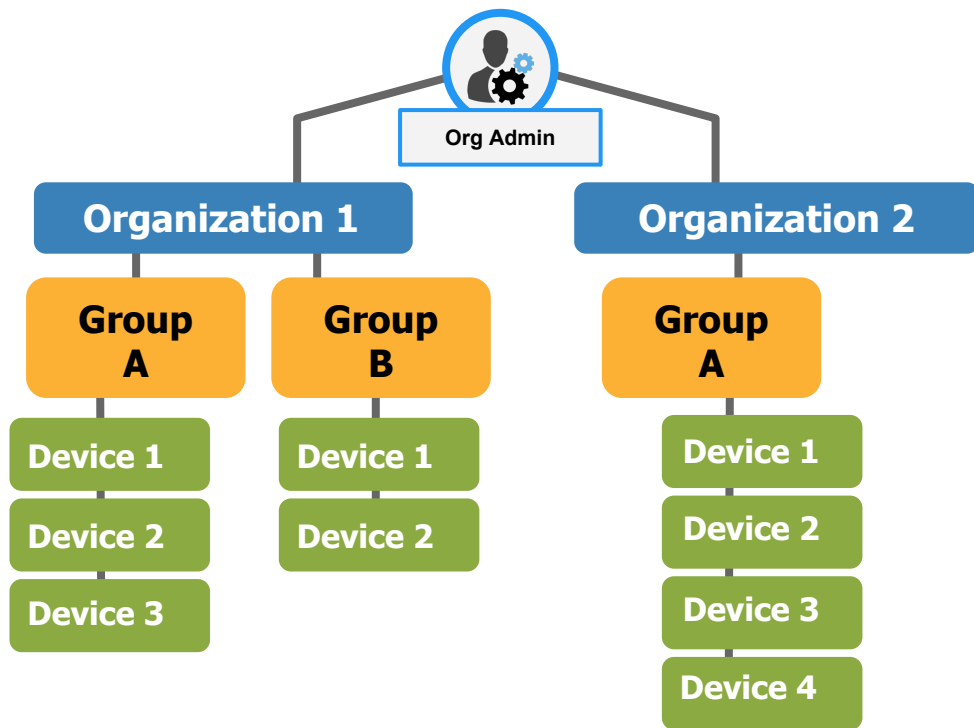
- Always a member of at least **one Organization**
- Can be a member of *any number of Organizations*
- Can be *given access* to a **single Group** within an **Organization**

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 number 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

- 1) Fill in basic **Account** information
- 2) **Submit**

A screenshot of the InControl 2 account creation interface. At the top is a dark grey header bar with the "InControl²" logo in white and the text "Cloud Based Device Management & Monitoring" to its right. Below the header is a light grey form area. The form contains several input fields: "E-mail Address", "First Name", "Last Name", "Password", and "Confirm password", each with a corresponding label to its left. Below these is a "Language" field with a dropdown menu currently showing "English". At the bottom right of the form is a blue "Submit" button. The entire interface is framed by a dashed orange border.

InControl² Cloud Based Device Management & Monitoring

E-mail Address

First Name

Last Name

Password

Confirm password

Language ▼

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.

We have sent an activation e-mail to you. Please click on the activation link in the e-mail.

 Login

InControl 2: Account Creation



Organization, Group and Device creation/addition

Create organization Jason Krapp [Sign out](#)

Organization Name

Country

Address

Location

ve NW

46.8914 -96.9294

Speed unit

Name your group

Group name

Address

Country

Address

Map

12th St S

Ave S

Location

Time Zone

Time Zone

InControl² Organization Level SHIELD HQ Organization Settings Add Devices

Overview PepVPN / SpeedFusion Organization Settings

Add Devices Into Groups

InControl 2 can check the warranty status of the following devices:

- Peplink Balance family
- Pepwave MAX family
- Pepwave Surf SOHO
- Pepwave Access Points
- Peplink FusionHub

For InControl 2 to manage a device, it needs to meet the these criteria.

Select Group

Select Tag(s)

Serial numbers: e.g.: XXXX-XXXX-XXXX

(Comma, space or carriage return separated)

[Next...](#) [Cancel](#)

InControl 2: Account Creation

New - Group Level Cloning



Name your group

Group Name

Description

Settings Cloning

Clone ☐ Group-wide SSID Settings
☐ VLAN Networks
☐ Captive Portals
☐ Device Schedule

Address

Country

Address

Map

27th Ave S
12th St S
ve S
28th Ave S

Map data ©2018 Google Terms of Use Report a map error

Location

Clone ☒ Group-wide SSID Settings
☐ VLAN Networks
☐ Captive Portals
☐ Device Schedule

from

Asgard Embassy
Asgard Embassy
Avengers Mansion
Helicarrier
Raft
Weapon X

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!

InControl²Organization Level SHIELD HQ > Overview >

OverviewPeplVPN / SpeedFusionOrganization SettingsGroupsSHIELD HQ

Organization Summary

Online4device(s)

Offline0device(s)

Total4device(s)

Clients0online

Groups

Search: Showing 1 to 4 of 4 entries

Name	Online Devices	Total Devices	Clients
Avengers Mansion	1	1	0
Fortress of Solitude	1	1	0
Helicarrier	1	1	0
Stark Tower	1	1	0

Manage...

Map

Map

Balance_A1ED



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.

63.138.197.58



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.



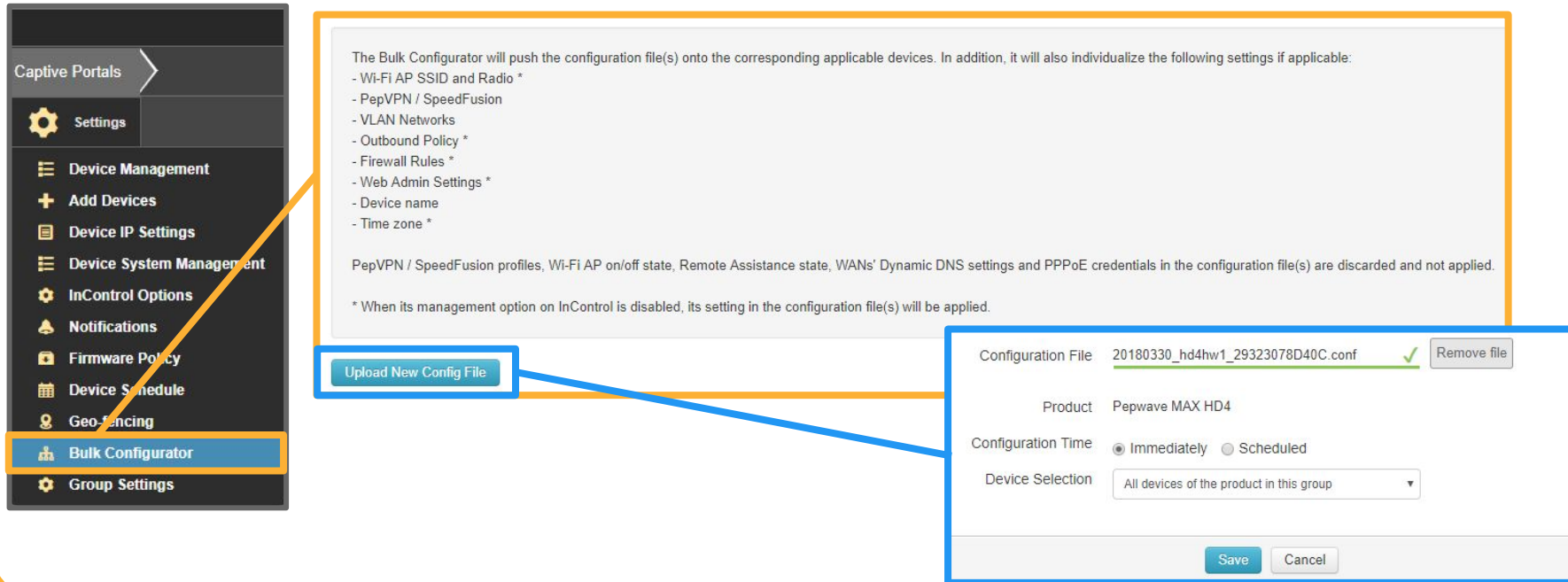
Customized Captive Portal

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.




The Bulk Configurator will push the configuration file(s) onto the corresponding applicable devices. In addition, it will also individualize the following settings if applicable:

- Wi-Fi AP SSID and Radio *
- PepVPN / SpeedFusion
- VLAN Networks
- Outbound Policy *
- Firewall Rules *
- Web Admin Settings *
- Device name
- Time zone *

PepVPN / SpeedFusion profiles, Wi-Fi AP on/off state, Remote Assistance state, WANs' Dynamic DNS settings and PPPoE credentials in the configuration file(s) are discarded and not applied.

* When its management option on InControl is disabled, its setting in the configuration file(s) will be applied.

Upload New Config File

Configuration File 20180330_hd4hw1_29323078D40C.conf  Remove file

Product Pepwave MAX HD4

Configuration Time ☒ Immediately ☐ Scheduled

Device Selection All devices of the product in this group ▼

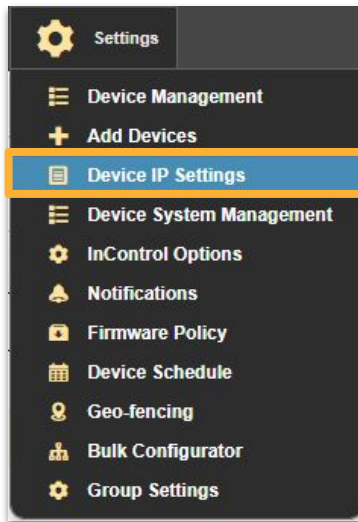
Save Cancel

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	192.168.1.0/24
LAN_MEDIA	Physical media setting	auto, 1000baseT, 100baseT, 10baseT
LAN_I2_ISO	Layer 2 isolation enabled (Inter-VLAN routing is disabled)	yes, no
LAN_STROUTEN	Static routing entry. Format is (original destination CIDR): (routing IP address)	172.16.0.0/24
DHCP_SERVER	DHCP server setting	enable, disable
DHCP_SERVER_LEASE	DHCP lease time in seconds	86400
DHCP_SERVER_NETMASK	DHCP server netmask	255.255.255.0
DHCP_SERVER_POOL_START	First address in the DHCP address pool (inclusive)	192.168.1.100
DHCP_SERVER_POOL_END	Last address in the DHCP address pool (inclusive)	192.168.1.254
DHCP_LOG_ENABLE	DHCP logging enabled	yes, no
DHCP_SERVER_DNS	DNS primary and (optional) secondary addresses	192.168.1.1
DHCP_SERVER_WINS	WINS primary and (optional) secondary addresses	192.168.1.1

InControl 2: Zero Touch Configuration



Group Level > Network Settings > Firewall or Outbound Policy Rules

Group Level

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

Search

Asgard Embassy

Avengers Mansion

Helicarrier

the Raft/test bench

✓ Weapon X

Outbound Policy

Firewall Rules

VLAN Networks

Captive Portals

Firmware

1	7.0.2 build 1496
0	7.0.2 build 3155

InControl²

Group Level > Michaelsofts Dev Inc > Billy Test Group 2

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

Firewall Rules

☒ Manage Firewall Rules on Balance and MAX devices

Import Rule Set from Configuration File

Search:

Rule Set Name	Applied on
Firewall Test	All devices
Test 1	Devices with all of the following tags: balance, group_2, FA-N10XG, FA-N904G
33456	Devices with any of the following tags: group_1, group_2
Master B310 Config (bad)	All devices
Master Config from B310	All devices

Outbound Policy ⓘ

☒ Manage Outbound Policy on Balance and MAX devices

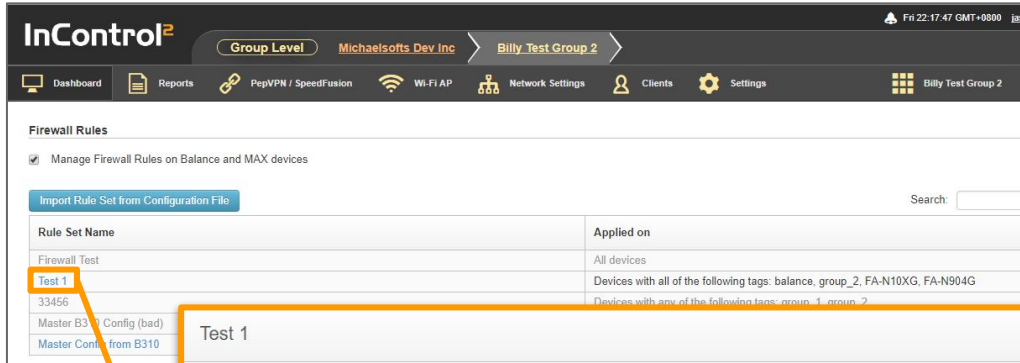
Save

Import Rule Set from Configuration File

Rule Set Name	Applied on
20180817_hd4hw1_29323078D40C (1)	All devices

Preserve outbound policy on devices that receive no rules (Default) Edit

InControl 2: Firewall Rules



Test 1

Firewall Rule Set

Enable ☒

Device Selection

Balance and MAX devices with all of the following tags

☒ FA-N10XG ☒ FA-N904G ☒ balance ☒ group_2

Outbound Firewall Rules

Enable	Name	Protocol	Source	Destination	Action
Enabled (Always on)	outbound test 1	TCP	1.2.3.4 50000 - 57000	www.mydomain.com 80	✓
	Default	Any	Any	Any	✗

Inbound Firewall Rules

Enable	Name	Protocol	WAN	Source	Destination	Action
Enabled (Always on)	inbound rule test 2	ICMP: 10	WAN 3	1.2.3.4	Any	✗
	Default	Any	Any	Any	Any	✗

Save Cancel

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



InControl²

Group Level: Michaelsofts Dev Inc > Billy Test Group 2

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

Outbound Policy

☒ Manage Outbound Policy on Balance and MAX devices

Save

Import Rule Set from Configuration File

Rule Set Name	Applied on
Test Profile	Devices with any of the following tags: group 2
20171116_b310h3_18248	
Master Config from B310	

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**!

Master Config from B310

Outbound Policy Rule Set

Enable ☒

Device Selection

All Balance and MAX devices

Enable	Name	Algorithm	Source	Destination	Protocol / Port
Enabled (Always on)	My Rule One	Weighted Balance: WAN 1: 10, WAN 2: 10, WAN 3: 10, Mobile Internet: 10	1.1.1.1	oneone.one	0 0
Enabled (Always on)	My Rule Two	Persistence (Src): WAN 1: 4, WAN 2: 5, WAN 3: 2, Mobile Internet: 6	2.2.2.0/24	Any	TCP 80
Enabled (Always on)	My Rule Three	Enforced: WAN 1 > WAN 2 > WAN 3 > Mobile Internet	Any	Any	TCP 143
Enabled (Always on)	My Rule Four	Priority: WAN 1 > WAN 2 > WAN 3 > Mobile Internet	11.11.11.11:11.11.11	youtube.com	UDP 514
Enabled (Always on)	My Rule Five	Overflow: WAN 2 > WAN 1 > WAN 3 > Mobile Internet	Any	1.1.1.0/24	0 0
Enabled (Always on)	My Rule Six	Least Used: WAN 1 > WAN 2 > WAN 3 > Mobile Internet	Any	127.1.1.1	0 0

Save Cancel

InControl 2: Outbound Policy



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

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_144hw1_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

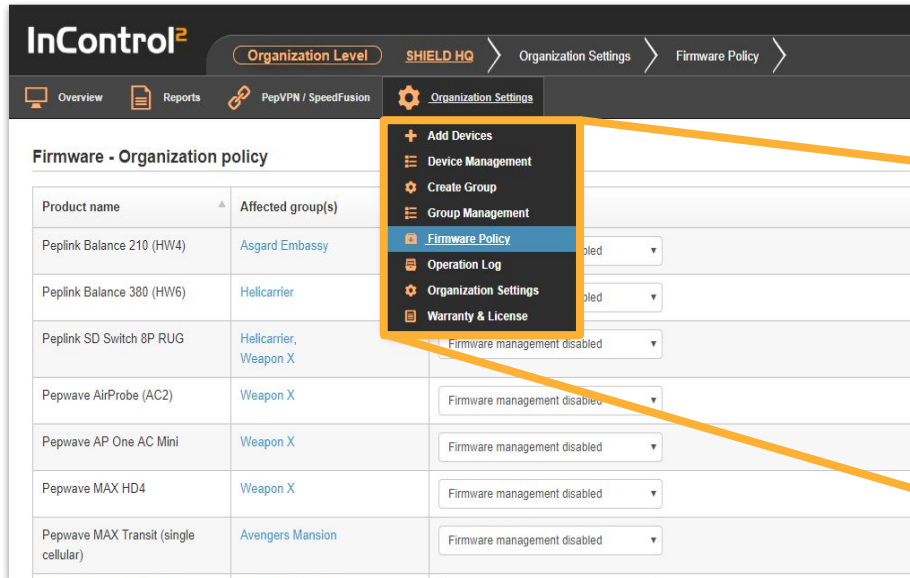
Connection	Weight
WAN Connection Name	10 +

Terminate Sessions on Link Recovery ☐ Enable

OK Cancel

InControl 2: Zero Touch (Firmware)

Organization Level > Organization Settings > **Firmware Policy**



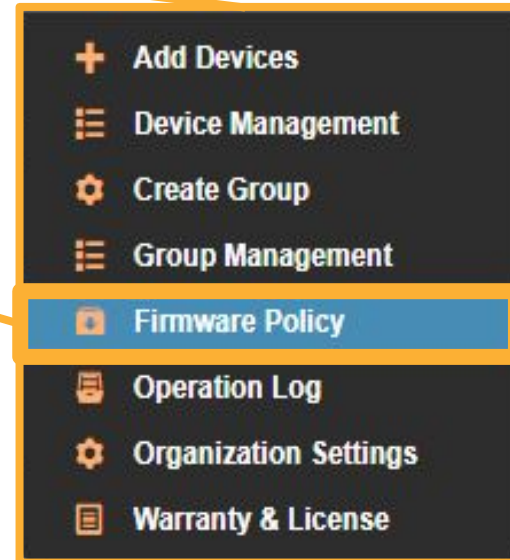
InControl²

Organization Level > SHIELD HQ > Organization Settings > Firmware Policy

Overview Reports PepVPN / SpeedFusion Organization Settings

Firmware - Organization policy

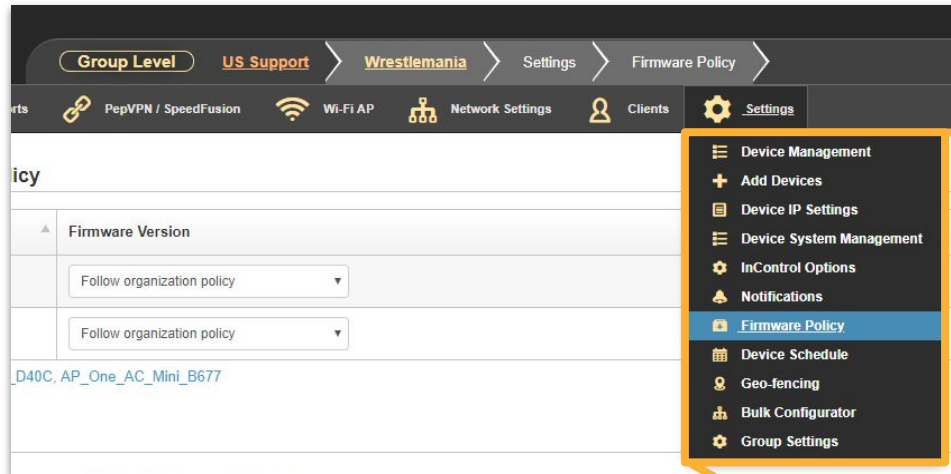
Product name	Affected group(s)	Firmware management status
Peplink Balance 210 (HW4)	Asgard Embassy	Firmware management disabled
Peplink Balance 380 (HW6)	Helicarrier	Firmware management disabled
Peplink SD Switch 8P RUG	Helicarrier, Weapon X	Firmware management disabled
Pepwave AirProbe (AC2)	Weapon X	Firmware management disabled
Pepwave AP One AC Mini	Weapon X	Firmware management disabled
Pepwave MAX HD4	Weapon X	Firmware management disabled
Pepwave MAX Transit (single cellular)	Avengers Mansion	Firmware management disabled



- + Add Devices
- ≡ Device Management
- ⚙ Create Group
- ≡ Group Management
- 🔒 Firmware Policy**
- 📄 Operation Log
- ⚙ Organization Settings
- 📄 Warranty & License

InControl 2: Zero Touch (Firmware)

Group Level > Settings > **Firmware Policy**



- Device Management
- + Add Devices
- Device IP Settings
- Device System Management
- InControl Options
- Notifications
- Firmware Policy**
- Device Schedule
- Geo-fencing
- Bulk Configurator
- Group Settings

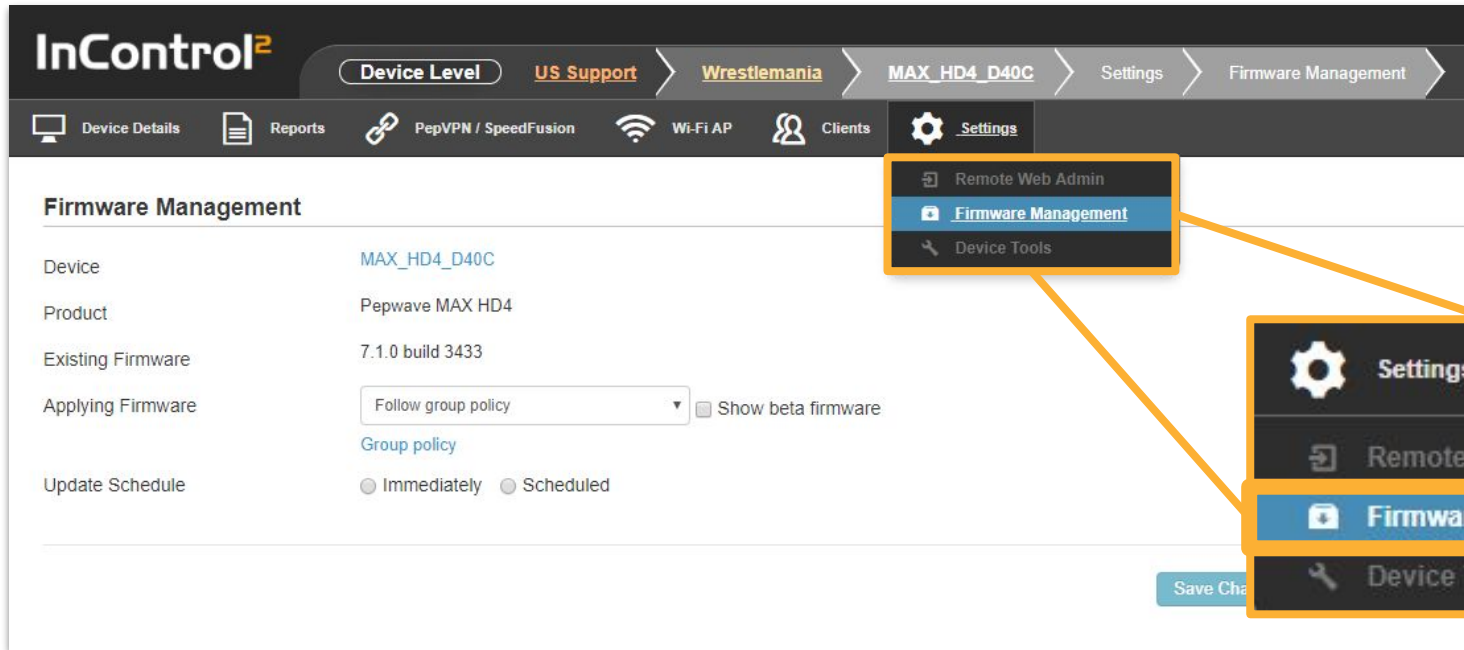
- Device Management
- + Add Devices
- Device IP Settings
- Device System Management
- InControl Options
- Notifications

Firmware Policy

- Device Schedule
- Bulk Configurator
- Ad Delivery Service
- Group Settings

InControl 2: Zero Touch (Firmware)

Device Level > Settings > **Firmware Management**



InControl²

Device Level > **US Support** > **Wrestlemania** > **MAX_HD4_D40C** > Settings > Firmware Management

Device Details Reports PepVPN / SpeedFusion Wi-Fi AP Clients **Settings**

Firmware Management

Device	MAX_HD4_D40C
Product	Pepwave MAX HD4
Existing Firmware	7.1.0 build 3433
Applying Firmware	<div>Follow group policy ▾</div> <input type="checkbox"/> Show beta firmware
	Group policy
Update Schedule	<input checked="" type="radio"/> Immediately <input type="radio"/> Scheduled

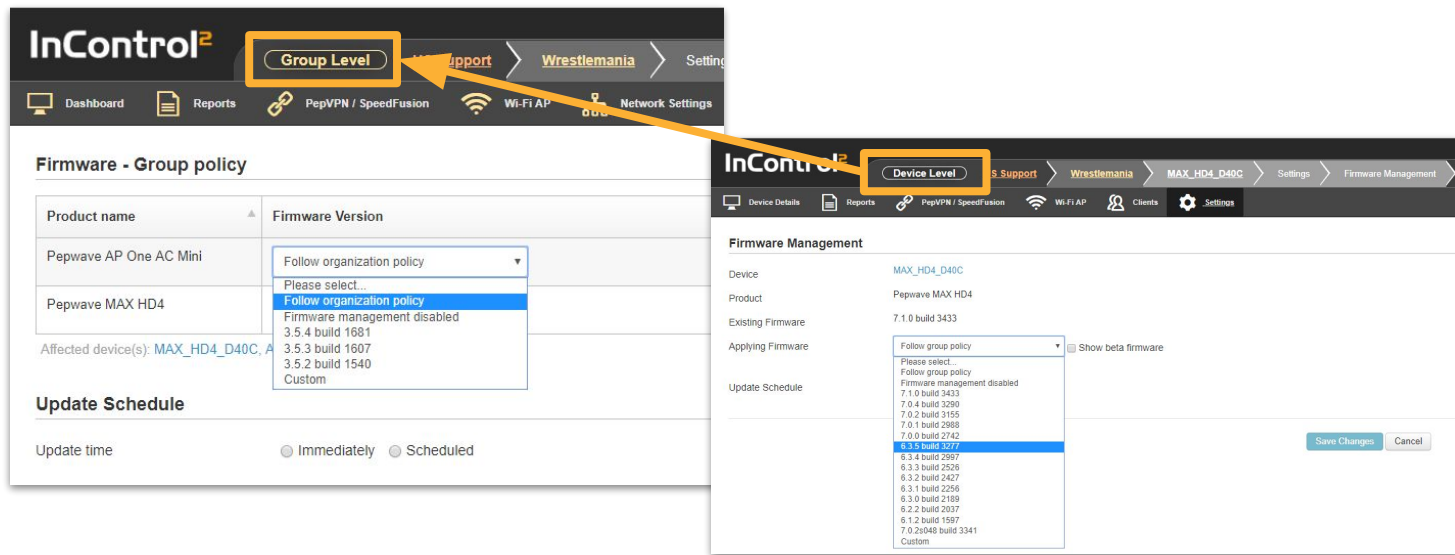
Save Changes

Settings

- Remote Web Admin
- Firmware Management**
- Device Tools

InControl 2: Zero Touch (Firmware)

Overview



The image displays two screenshots of the InControl 2 web interface, illustrating the firmware management configuration process. An orange arrow points from the 'Group Level' tab in the left screenshot to the 'Device Level' tab in the right screenshot.

Left Screenshot: Firmware - Group policy

The 'Group Level' tab is selected. The 'Firmware - Group policy' section shows a table with columns 'Product name' and 'Firmware Version'. The 'Firmware Version' column has a dropdown menu open, showing options: 'Follow organization policy', 'Please select...', 'Follow organization policy' (highlighted), 'Firmware management disabled', '3.5.4 build 1681', '3.5.3 build 1607', '3.5.2 build 1540', and 'Custom'. Below the table, it indicates 'Affected device(s): MAX_HD4_D40C, A'. The 'Update Schedule' section shows 'Update time' with radio buttons for 'Immediately' and 'Scheduled'.

Right Screenshot: Firmware Management

The 'Device Level' tab is selected. The 'Firmware Management' section shows details for a specific device: 'Device: MAX_HD4_D40C', 'Product: Pepwave MAX HD4', 'Existing Firmware: 7.1.0 build 3433', and 'Applying Firmware: Follow group policy'. A dropdown menu for 'Applying Firmware' is open, showing a list of firmware versions: 'Follow group policy', 'Please select...', 'Follow group policy', 'Firmware management disabled', '7.1.0 build 3433', '7.0.4 build 3290', '7.0.2 build 3155', '7.0.1 build 2988', '7.0.0 build 2742', '6.3.5 build 3222' (highlighted), '6.3.4 build 2997', '6.3.3 build 2526', '6.3.2 build 2427', '6.3.1 build 2256', '6.3.0 build 2189', '6.2.2 build 2037', '6.1.2 build 1597', '7.0.2to48 build 3341', and 'Custom'. A 'Show beta firmware' checkbox is also visible. At the bottom right, there are 'Save Changes' and 'Cancel' buttons.

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	<input type="checkbox"/> 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	<input type="checkbox"/> 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 <input type="checkbox"/> Show beta firmware
	Group policy
Update Schedule	<input checked="" type="radio"/> Immediately <input type="radio"/> Scheduled

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

InControl 2: Zero Touch (Firmware)

Custom Firmware

Firmware Management

Device [Balance_28C3](#)

Product Peplink Balance 210

Hardware Revision 4

Existing Firmware 7.1.0 build 3433


Applying Firmware

Custom

Firmware URL:

Verify

⚠ The device will not follow the [Group policy](#). It will not receive the firmware specified on the group policy page.

Upgrade only 



Update Schedule

☒ Immediately ☐ Scheduled

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

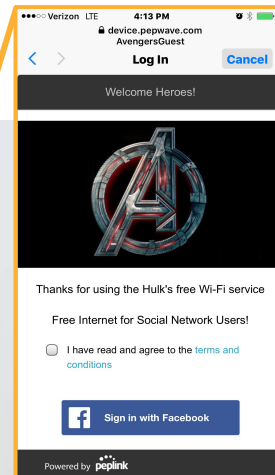
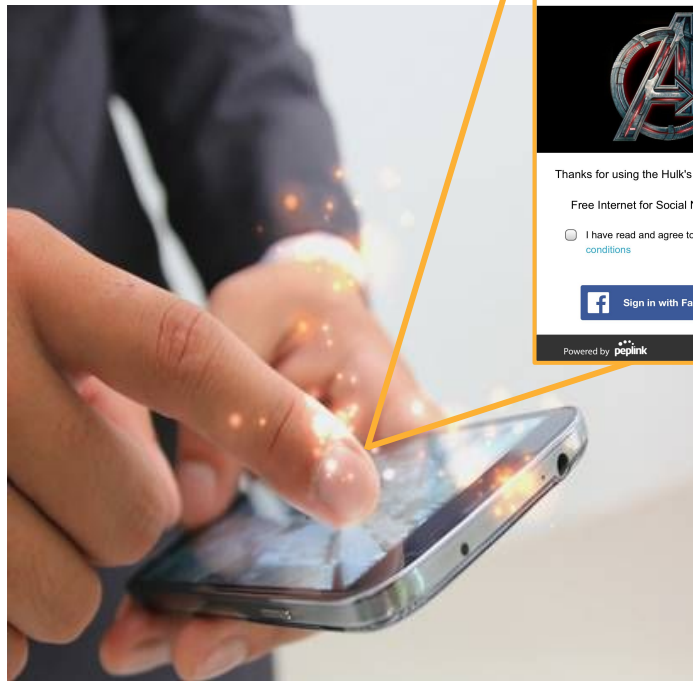
InControl 2: Zero Touch (Wi-Fi)

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



The screenshot shows the InControl 2 Group Level interface. The top navigation bar includes 'Group Level', 'US Support', 'Wrestlemania', and 'Dashboard'. The left sidebar contains 'Dashboard', 'Reports', 'PepVPN / SpeedFusion', 'Wi-Fi AP', 'Network Settings', 'Clients', and 'Settings'. The 'Network Settings' menu is open, showing 'Outbound Policy', 'Firewall Rules', 'VLAN Networks', and 'Captive Portals' (highlighted). The main content area displays a summary of the 'Wrestlemania' group (Jason's Test group on Mars) with statistics: 2 Online devices, 1 Offline device, 3 Total devices, and 1 Client online. Below this is the 'Device List' table, which shows 3 devices. The table has columns for Status, Device Name, Tags, Wi-Fi Config, Product Name, Uptime, Online, WAN, Usage, Clients, Firmware, and Last Config Applied.

Status	Device Name	Tags	Wi-Fi Config	Product Name	Uptime	Online	WAN	Usage	Clients	Firmware	Last Config Applied
Online	☆ AP_One_AC_Mini_B677		Group level	AP One AC Mini	4 hours	4 hours		1.0 kbps	0	3.5.4 build 1681	4 hours ago
Online	☆ MAX_HD4_D40C		Group level	MAX HD4 (HW1)	4 hours	4 hours	1	0 bps	1	7.1.0 build 3433	4 hours ago
Offline	☆ MAX_BR1_561A		Group level	MAX BR1 (HW2)	-	8 hours ago	-	-	-	-	-

Buttons: Edit, Download as CSV, Manage...

- Group Level > Network Settings > Captive Portals

InControl 2: Group Level

Wi-Fi Configuration: Captive Portal



InControl² Thu 12:12:33 GMT-0600 [jasonk@peplink.com](#) | [Sign out](#)

Group Level **US Support** > **Wrestlemania** > Network Settings > Captive Portals >

[Dashboard](#) [Reports](#) [PepVPN / SpeedFusion](#) [Wi-Fi AP](#) [Network Settings](#) [Clients](#) [Settings](#) [Wrestlemania](#) [US Support](#)

Captive Portals

[New Captive Portal](#) [?](#) Search:

Name	Access Modes	SSIDs applied on	VLANs applied on	Actions
No data available				

Note: Peplink Balance and Pepwave MAX firmware prior to 7.0.1 supports one captive portal only.

- Click **New Captive Portal**

InControl 2: Group Level

Wi-Fi Configuration: Captive Portal



Captive Portal Settings

Enable ☒ Note: The captive portal feature only works with Peplink Balance, Pepwave MAX and Pepwave AP devices. They must be under warranty and online on InControl.

Name

Company Name

Access Mode Social Open Access Guest Account Token E-mail SMS

Enable ☒

☒ Facebook
Note: Optional. For customizing background image and logo. This mode is unavailable on some models.

☐ Google ID

☐ WeChat Please complete the WeChat Settings in the [Group Settings](#) page first.

☐ Twitter

☐ Instagram

Preview and Customization Save Changes Cancel

Landing Page (Not available on Android devices)

☐ Display a signed-in page with a Start Browsing button. Clicking the button will redirect to the URL the guest user had originally requested. In the auto-login popup browser on iOS, clicking the button will redirect to:

☐ Display a signed-in page with a Start Browsing button. Clicking the button will unconditionally redirect to:

☐ Redirect to:

Preview and Customization Save Changes Cancel

Basic Settings

Language English

Default Language Auto detect

Logo

Drop image here to upload (or Click)

Note: Maximum size: 512 KB. Supported formats: PNG, JPEG and GIF. Maximum width: 460px

Background Color

Background Image

Drop image here to upload (or Click)

Note: Maximum size: 1 MB. Supported formats: JPEG, PNG and GIF

Splash Screen

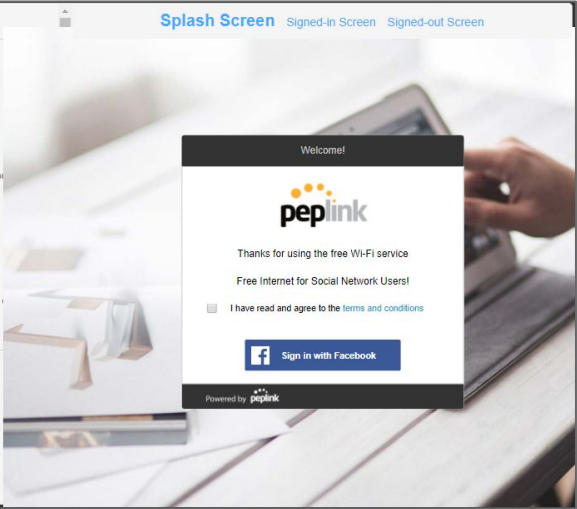
Title Text

Title Text Color

Header Color

Background Color (behind)

Done



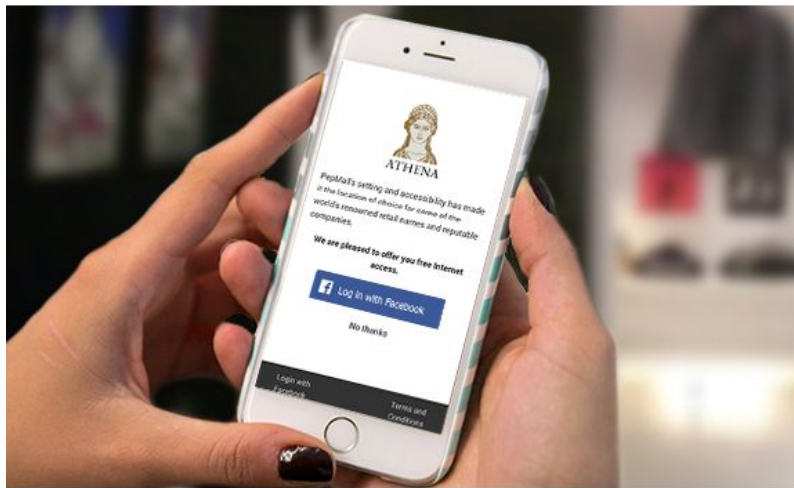
InControl 2: Group Level

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:



InControl 2: Group Level

Wi-Fi Configuration - VLAN setup



InControl²

Group Level > US Support > Wrestlemania > Network Settings > VLAN Networks

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

Outbound Policy
Firewall Rules
VLAN Networks
Captive Portals

VLAN Networks

Add VLAN Network

LAN Name	VLAN	Apply to	Captive Portal
Untagged LAN	None	All devices	None
SocialTest6	66	All devices	SocialTest6

- **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



VLAN Network Settings

Note: Devices include Pepwave MAX, Peplink Balance and SD Switch

Settings for Peplink SD Switch

IP Settings: DHCP (Default)

Host Name: bob

DNS Servers: ☒ Obtain DNS server addresses automatically
☐ Use the following DNS server address(es)

Settings for Peplink Balance and Pepwave MAX

Default IP Address: 192.168.58.1

Subnet Mask: 255.255.255.0 (/24)

Inter-VLAN Routing: ☐

Captive Portal: Test

Note: For Pepwave AP, please apply the captive portal to an SSID

Apply to: All devices

Save **Cancel**

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

VLAN Network Settings

DHCP Server Settings for Peplink Balance and Pepwave MAX

☒ DHCP Server

DHCP Server Logging: ☐

Exclude IP Addresses: The first and last IP addresses in the subnet of the VLAN on a device will not be offered.

E.g.: If the IP subnet of the VLAN on a device is 192.168.0.0/16, and both of the fields are set to 10, then IP addresses from 192.168.0.1 to 192.168.0.10, and from 192.168.255.245 to 192.168.255.254 will not be offered.

Note: In case the total number of excluded IP addresses is more than the IP addresses in a subnet, no IP addresses will be excluded.

Lease Time: Days Hours Mins

DNS Servers: ☒ Assign DNS server automatically

WINS Servers: ☐ Assign WINS server

BOOTP: ☐

Save **Cancel**

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

InControl 2: Group Level

Wi-Fi Configuration - SSID setup



InControl²

Group Level > US Support > Wrestlemania > Wi-Fi AP > Group-wide SSID Settings

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

Group-wide SSID Settings

Wi-Fi Management ☒

Add new SSID

SSID	Security	SSID Visibility	Radio Selection
Social Test 6	Open - No Encryption	Show this SSID	Dual band operation (2.4 GHz and 5 GHz)

- **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



SSID Settings

SSID: Social Test 6

Enable: ☒

SSID Availability

Device Selection: This SSID is enabled on all devices

Security Settings

Security Policy: Open - No Encryption

Layer 2 Isolation: ☐ Enable

SSID Discovery

SSID Visibility: Show this SSID

Security Settings

Security Policy: WPA2 - Personal

Encryption: AES:CCMP

Shared Key [fewer options]: ☒ Static ☐ Last 8 octets of LAN MAC address ☐ Random

Layer 2 Isolation: ☐ Enable

[Show Password](#)

New PSK options!

SSID Settings

Per Client Downstream Limit: 0 kbps (0: Unlimited)

Network Priority (QoS): Gold

Note: The settings will not be applied.

VLAN Settings

VLAN Tagging: ☒

VLAN ID: 66 (1 - 4094)

VLAN Name: 66 (SocialTest6)

Restriction Mode

Restriction Mode: None

Multicast Settings

Multicast Filter: Disabled

Multicast Rate: 0

IGMP Snooping: ☐ Enable

Radio Selection

Radio Selection: 2.4GHz

Maximum Number of Clients

Maximum Number of Clients: 100

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

Schedule

Schedule: Always on

Captive Portal Settings

Captive Portal: None

Note: The captive portal will be applied to the SSID on Pepwave AP only. To have the captive portal be effective on Peplink Balance and Pepwave MAX, please apply it to this SSID's VLAN on VLAN Networks page.

Save Changes

Cancel

InControl 2: Group Level

Wi-Fi Configuration - SSID setup



Dashboard Reports PepVPN / SpeedFusion Wi-Fi AP Network Settings


Wrestlemania ☆ Jason's Test group on Mars

Online
2
device(s)

Offline
1
device(s)

Device List

Search devices... 3 device(s)

Status	Device Name	Tags	Wi-Fi Config	Product Name
☆	AP_One_AC_Mini_B677		Group level	AP One AC Mini
☆	MAX_HD4_D40C		Group level	MAX HD4 (HW1)
☆	MAX_BR1_561A		Group level	MAX BR1 (HW2)

Edit


Download as CSV
Manage...

Verizon LTE 4:13 PM

device.pepwave.com
AvengersGuest

Log In Cancel


Welcome Heroes!




Thanks for using the Hulk's free Wi-Fi service

Free Internet for Social Network Users!

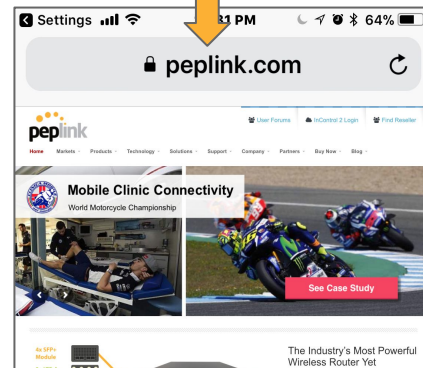
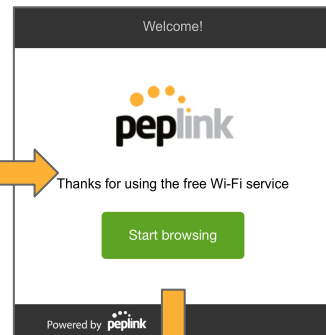
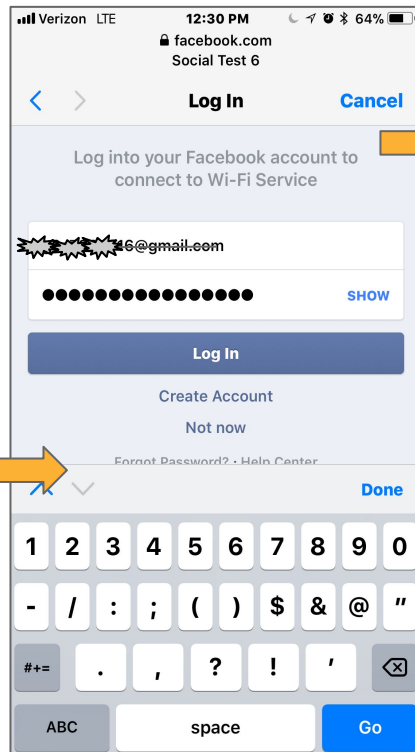
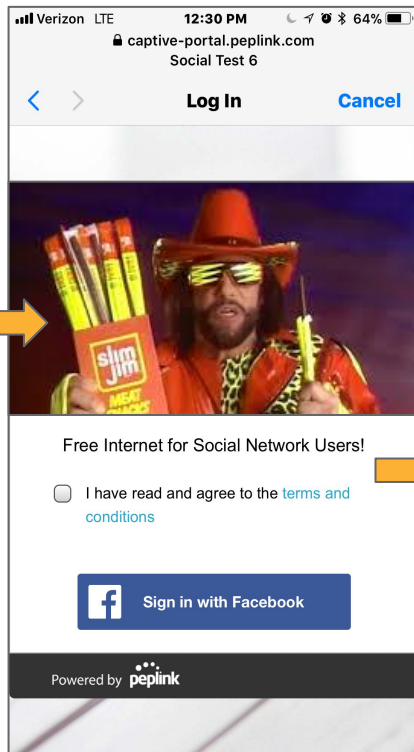
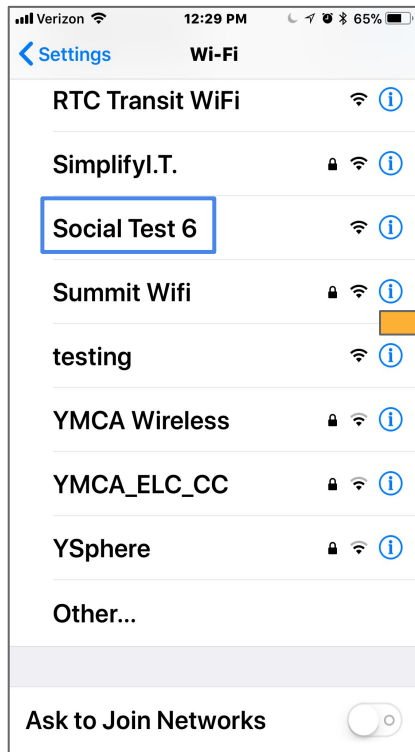
☐ I have read and agree to the [terms and conditions](#)

 Sign in with Facebook

Powered by 

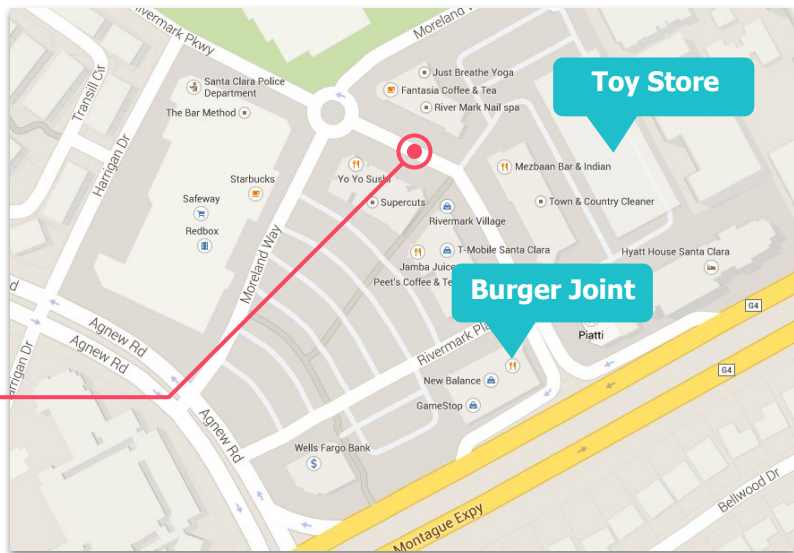
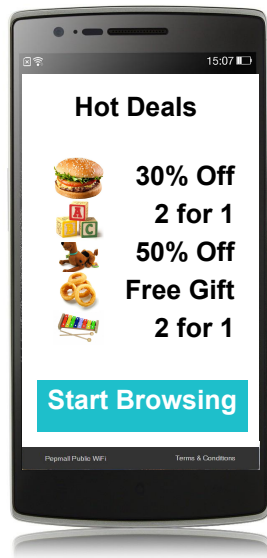
InControl 2: Group Level

Wi-Fi Configuration - Login Path

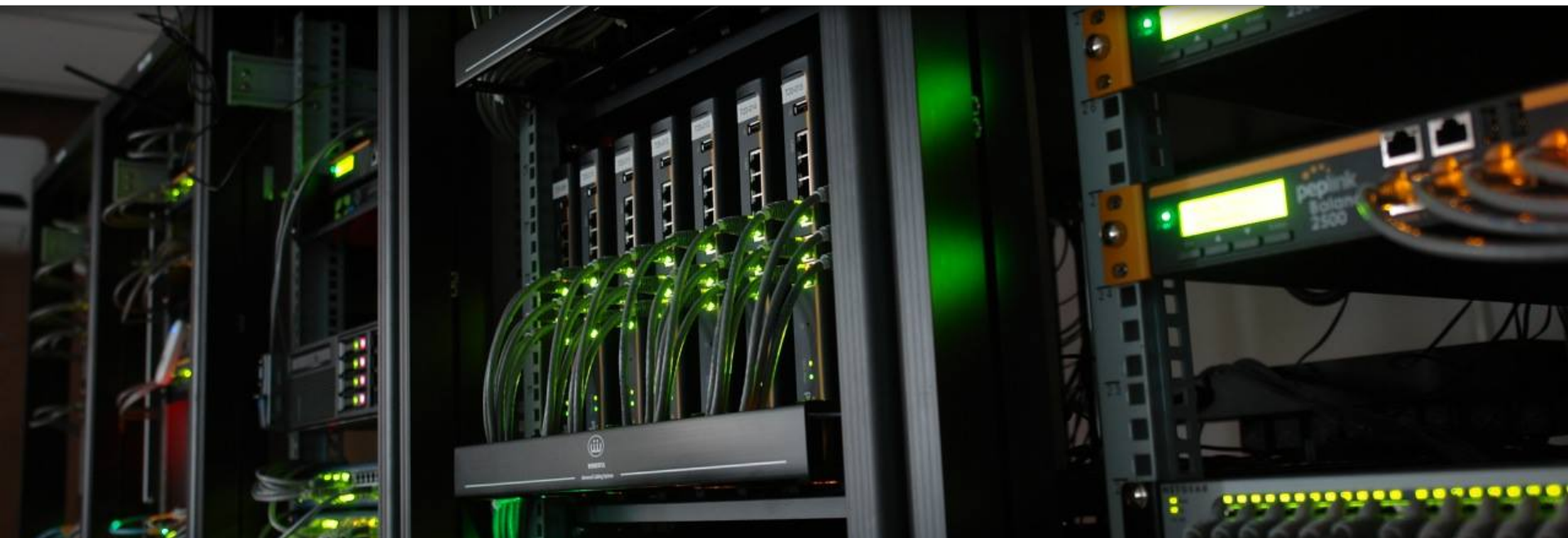


InControl 2: Group Level

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



InControl 2 - Data Usage Requirements

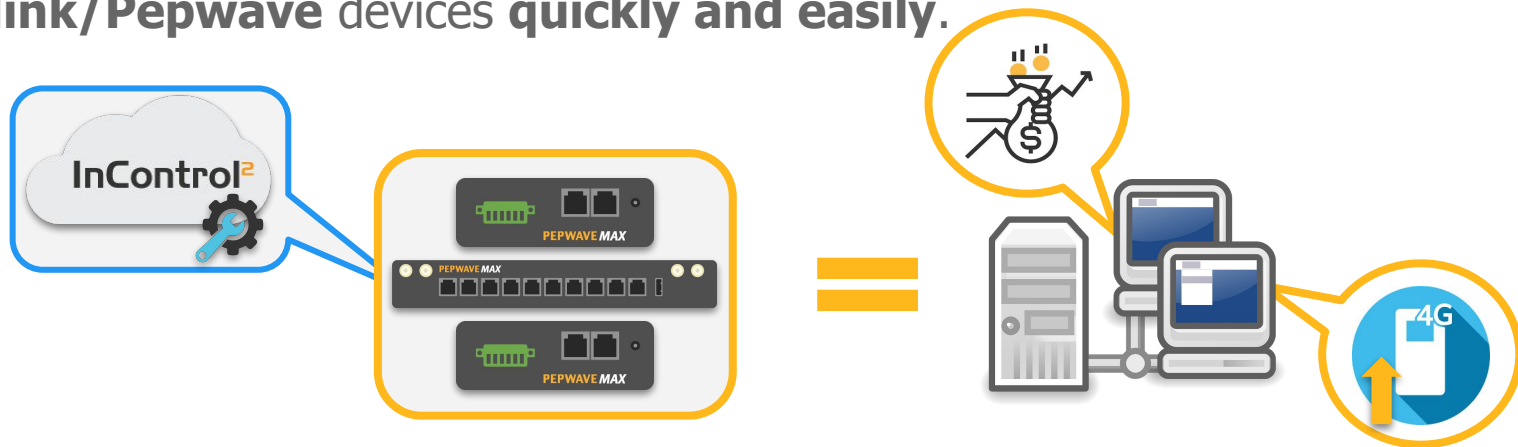
InControl2 -Low Data Usage Mode



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



InControl²

Group LevelSHIELD HQ>Weapon X>Settings>InControl Options>

DashboardReportsPepVPN / SpeedFusionWi-Fi APNetwork SettingsClientsSettings

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)

GPS Location Collection60 location points every hour

Minimum Communication Interval15 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.

Save ChangesCancel

- Device Management
- + Add Devices
- Device IP Settings
- Device System Management
- InControl Options**
- Notifications
- Firmware Policy
- Device Schedule
- Geo-fencing
- Bulk Configurator
- Ad Delivery Service
- Group Settings

Group Level:

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

InControl 2 - Low Data Usage Mode



Overview

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)

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.

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

Estimated Base Data Usage



130.9 MB with GPS data

125.3 MB without GPS data

(Click me for more options)

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

InControl 2 - Low Data Usage Mode

InControl Options

Disable Device Configuration

Disable Firmware Management

Low Data Usage Mode

Disable Device Reporting

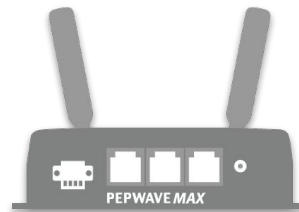
Disable Live Status Queries

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

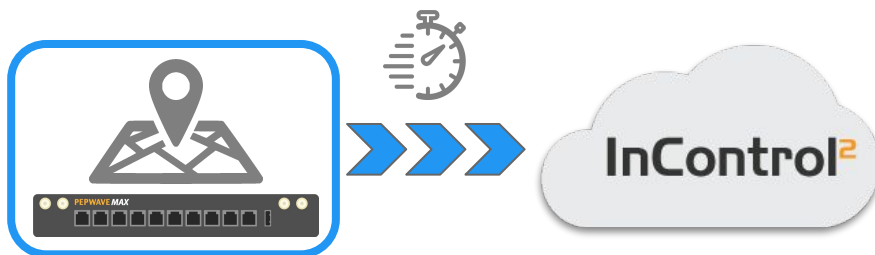
Disable Live Status Queries

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

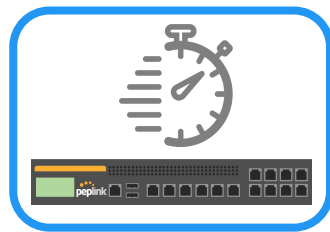
Disable Live Status Queries

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



28 seconds (Default: 28 seconds)

seconds
minutes

InControl 2 - Help Calculator Tool



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

InControl 2

Group Level SHIELD HQ Weapon X Settings InControl Options

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

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)

GPS Location Collection 30 location points every minute (↑)

Minimum Communication Interval 28 seconds (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.

Save Changes Cancel

Estimated Base Data Usage
335 MB with GPS data
167.6 MB without GPS data
(Click me for more options)

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

InControl 2 - Help Calculator Tool



Overview

Help Tool to determine data usage

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

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





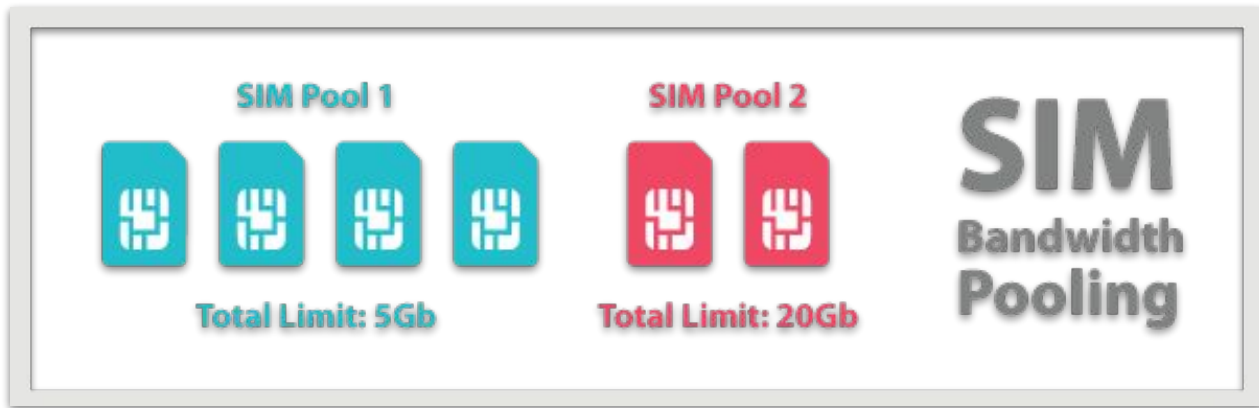
InControl 2 - SIM Pooling

InControl 2 - SIM Pooling

Overview

SIM Pooling allows you to define multiple **SIMs** 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**.

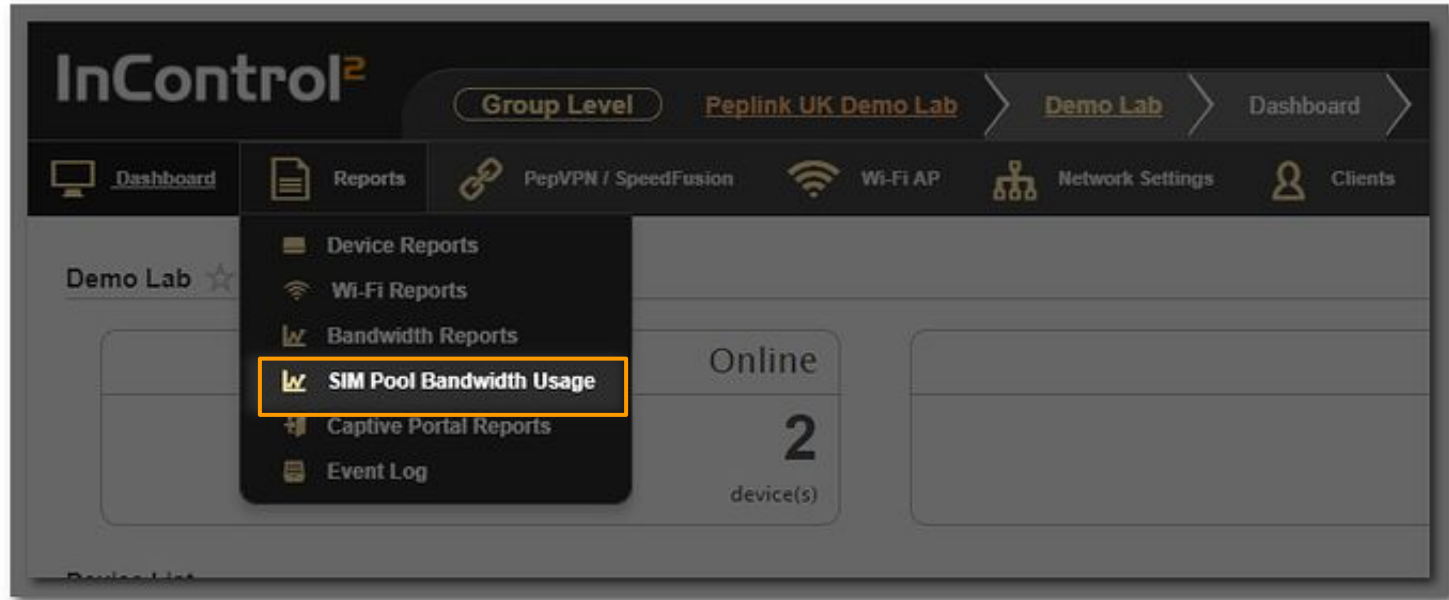
The screenshot shows the InControl 2 web interface. The top navigation bar includes 'Device Level', 'Reports', 'PepVPN / SpeedFusion', 'Clients', and 'Settings'. The main content area displays 'Device Details' for 'MAX_BR1_ENT'. The 'Information' tab is active, showing details like Device Name, Serial Number, Model, Uptime, Online status, First Appeared, History, Firmware, and Warranty Expiry Date. The 'Status' tab is also visible, showing network status (Connected), WAN Type (Cellular), IP Address, IP Subnet, DNS Servers, Routing Mode, MTU, and SIM Card A IMSI (highlighted with an orange box). The SIM Card A ICCID, SIM Card A MTN, and SIM Card B IMSI are also listed.

Information	Status
Device Name	Untagged LAN
Serial Number	WAN
Model	Cellular
Uptime	WAN Type
Online	IP Address
First Appeared	IP Subnet
History	DNS Servers
Firmware	Routing Mode
Warranty Expiry Date	MTU
	SIM Card A IMSI
	SIM Card A ICCID
	SIM Card A MTN
	SIM Card B IMSI

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**

A screenshot of the InControl 2 web interface. The top navigation bar includes a logo, a breadcrumb trail "Organization Level > SHIELD HQ > Overview", and a menu with "Overview", "Reports", "PepVPN / SpeedFusion", and "Organization Settings". The "Reports" menu is open, showing a sub-menu item "SIM Pool Data Usage" which is highlighted with an orange box. Below the menu, the page title is "Organization Summary". The main content area displays two statistics: "Online" with a value of "1" and "Offline" with a value of "13", both labeled as "device(s)".

Organization Summary	
Online	Offline
1	13
device(s)	device(s)

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**

SIM Pool Bandwidth Usage				
Carrier Pools				
Report	Carrier Name	No. of SIMs	Current Usage	Start
	All Carriers	2		Conf
	T-Mobile UK (GB)	2		Conf
Custom Pools				
New SIM Pool				
Report	Pool Name	No. of SIMs	Current Usage	Start Day
No data available				

InControl 2 - SIM Pooling



Configuration

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

A screenshot of the InControl 2 web interface showing the "SIM Pool Bandwidth Usage" configuration page. A modal window titled "New SIM Pool" is open, allowing for the creation of a new SIM pool. The modal contains several input fields: "Pool Name" (text), "IMSI" (text area with a note "One IMSI per line"), "Monthly Bandwidth Quota" (text input with "GB" unit), "Initial SIM Pool Usage" (text input with "0" and "GB" unit), "Start Day" (dropdown menu set to "1st" with a note "of each month at 00:00 midnight"), and "Remarks" (text area). At the bottom of the modal are "Save" and "Cancel" buttons. In the background, the main interface shows a sidebar with "Carrier Pools" and "Custom Pools" sections. The "New SIM Pool" button in the "Custom Pools" section is highlighted with an orange rectangle. A table under "Carrier Pools" is partially visible, showing columns for "Report" and "Carrier".

SIM Pool Bandwidth Usage

Carrier Pools

Report	Carrier
	All Carriers
	3 (GB)
	T-Mobile
	Vodafone

Custom Pools

New SIM Pool

Pool Name

IMSI

One IMSI per line

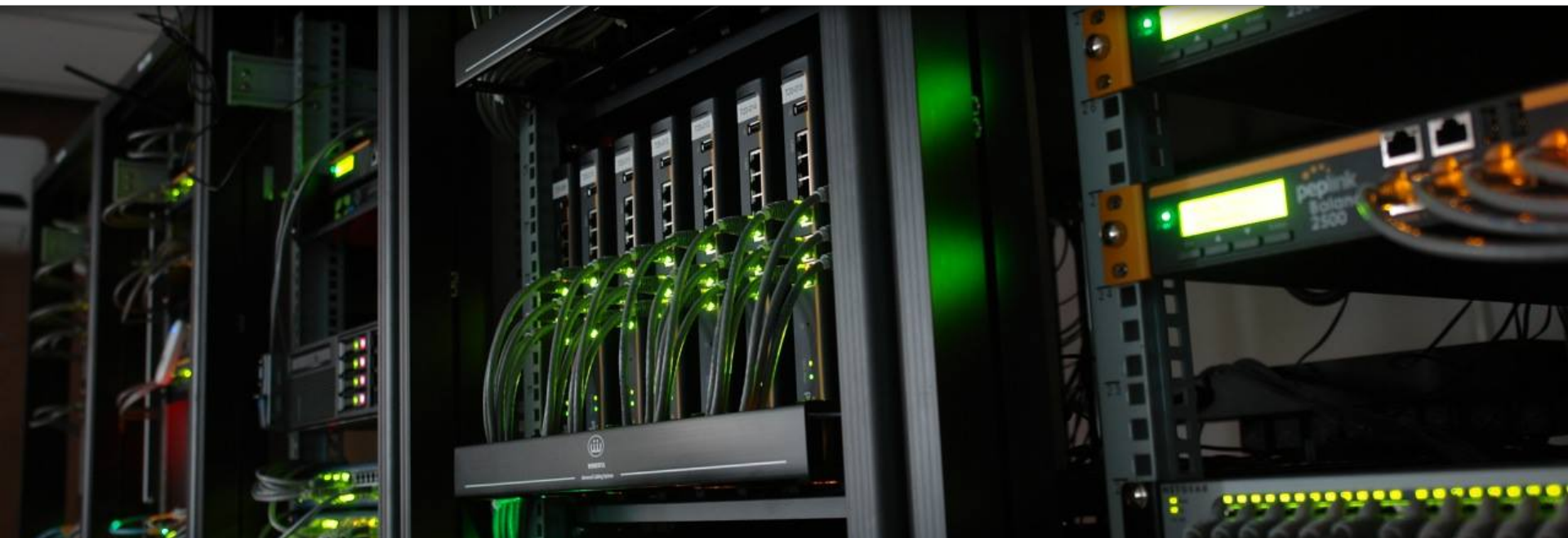
Monthly Bandwidth Quota GB

Initial SIM Pool Usage 0 GB

Start Day On 1st of each month at 00:00 midnight

Remarks

Save **Cancel**



InControl 2 - GPS

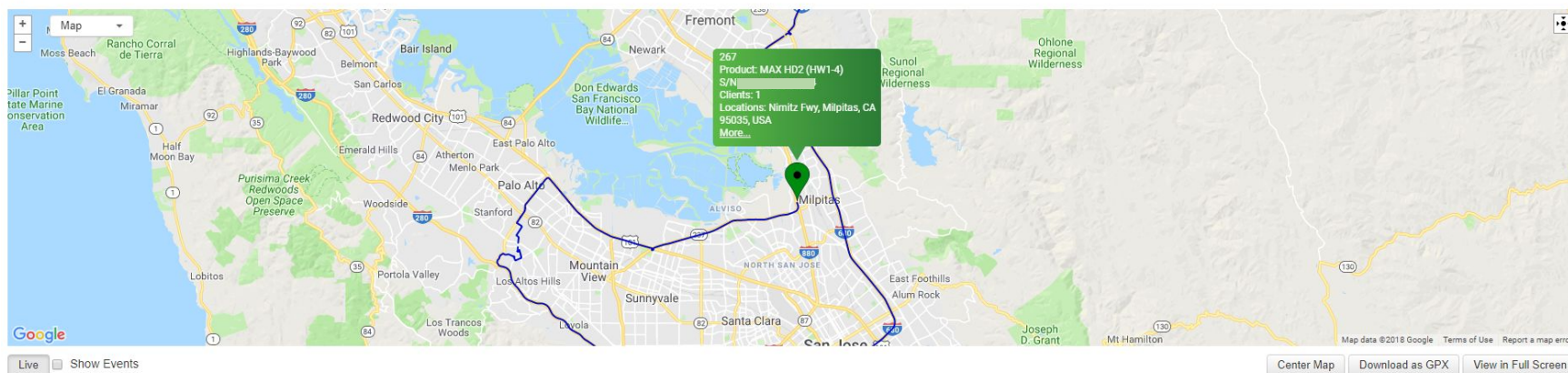
InControl 2 - GPS



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.

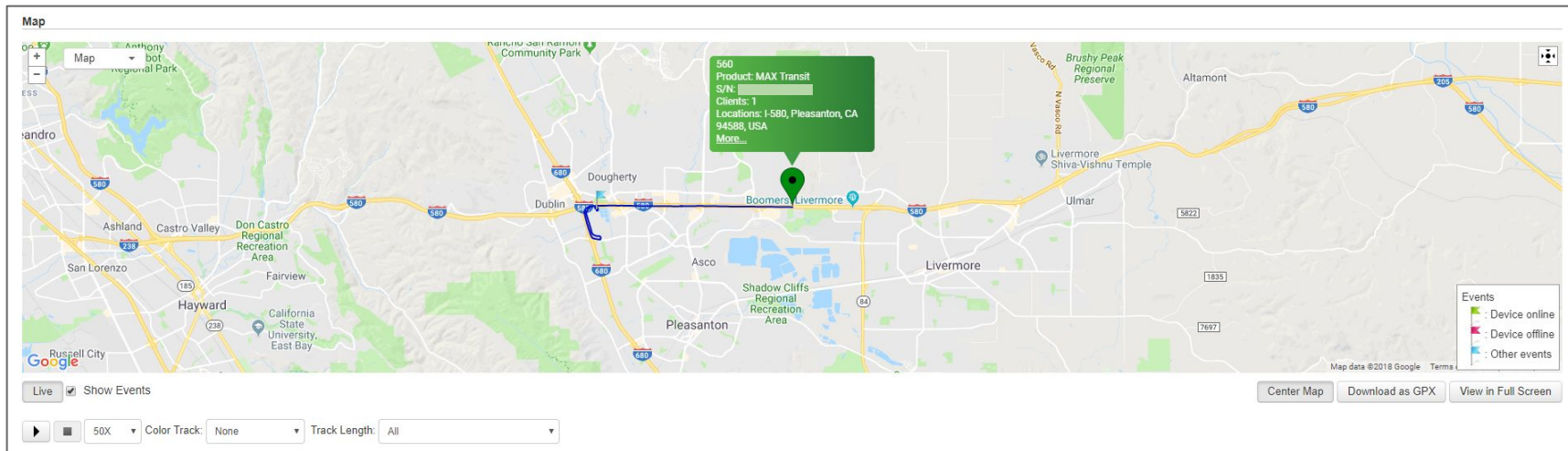
Map



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

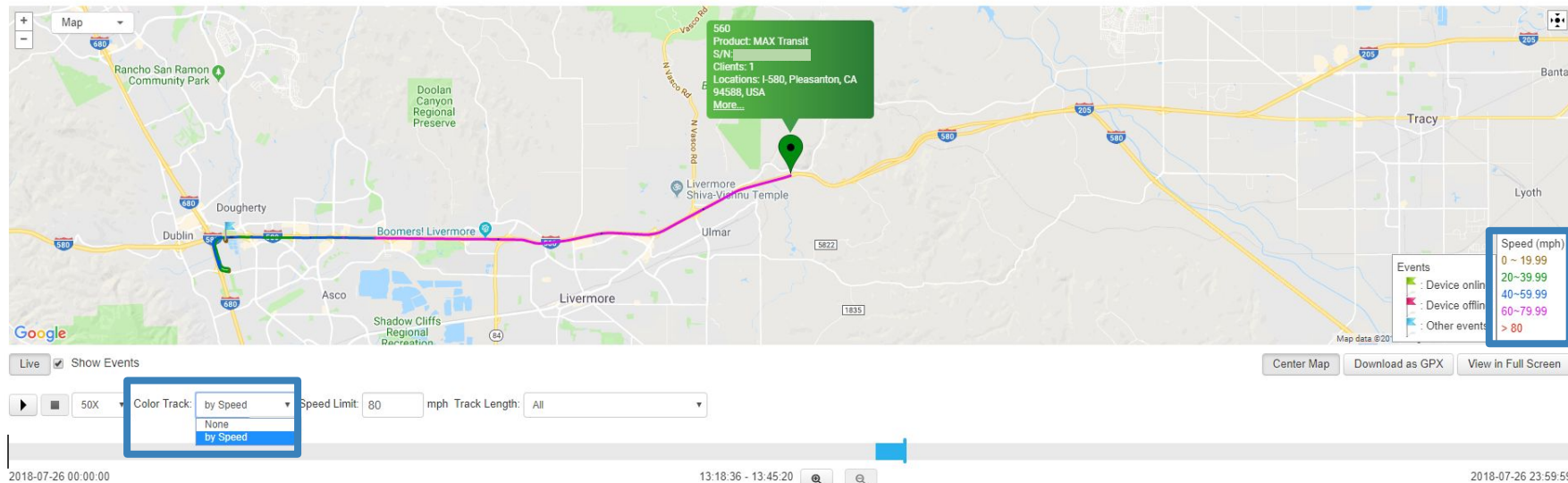


InControl 2 **GPS** reporting



Vehicle speed tracking

Map



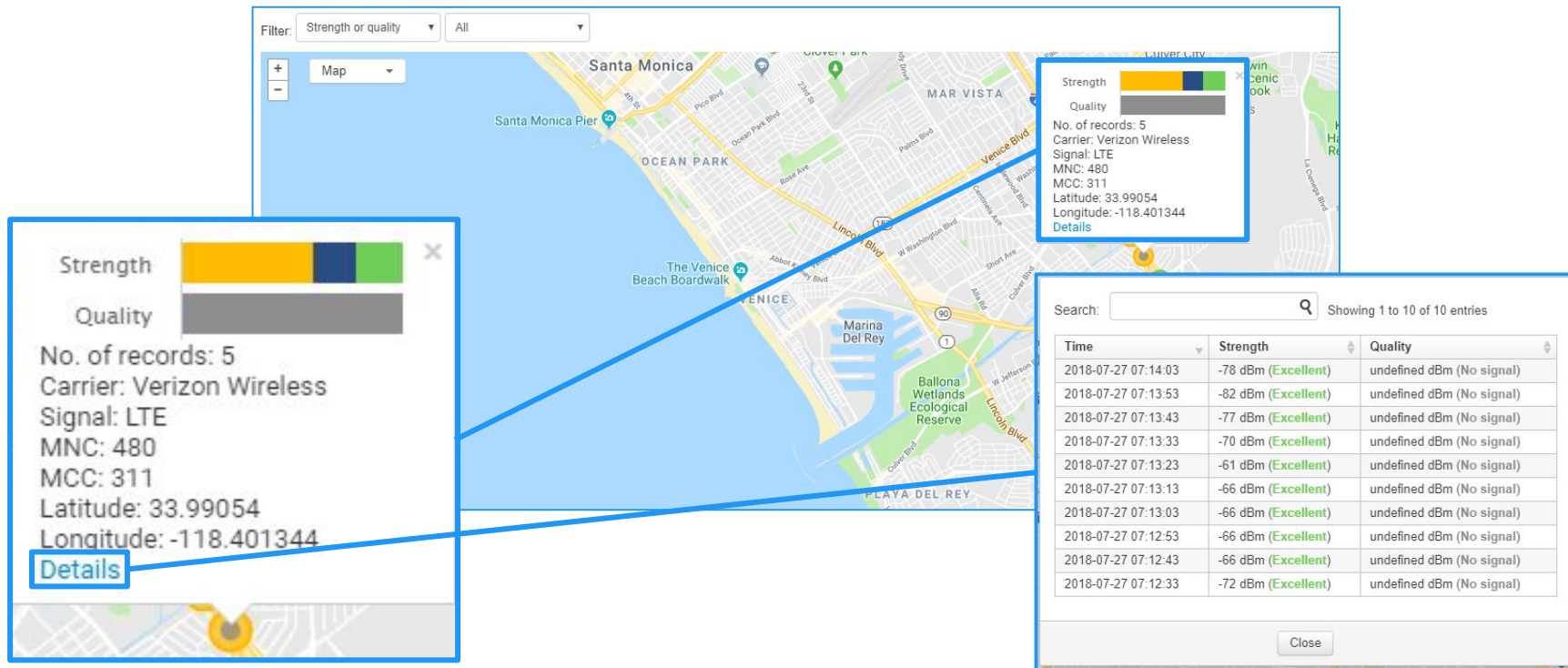
Track vehicle speed along GPS route

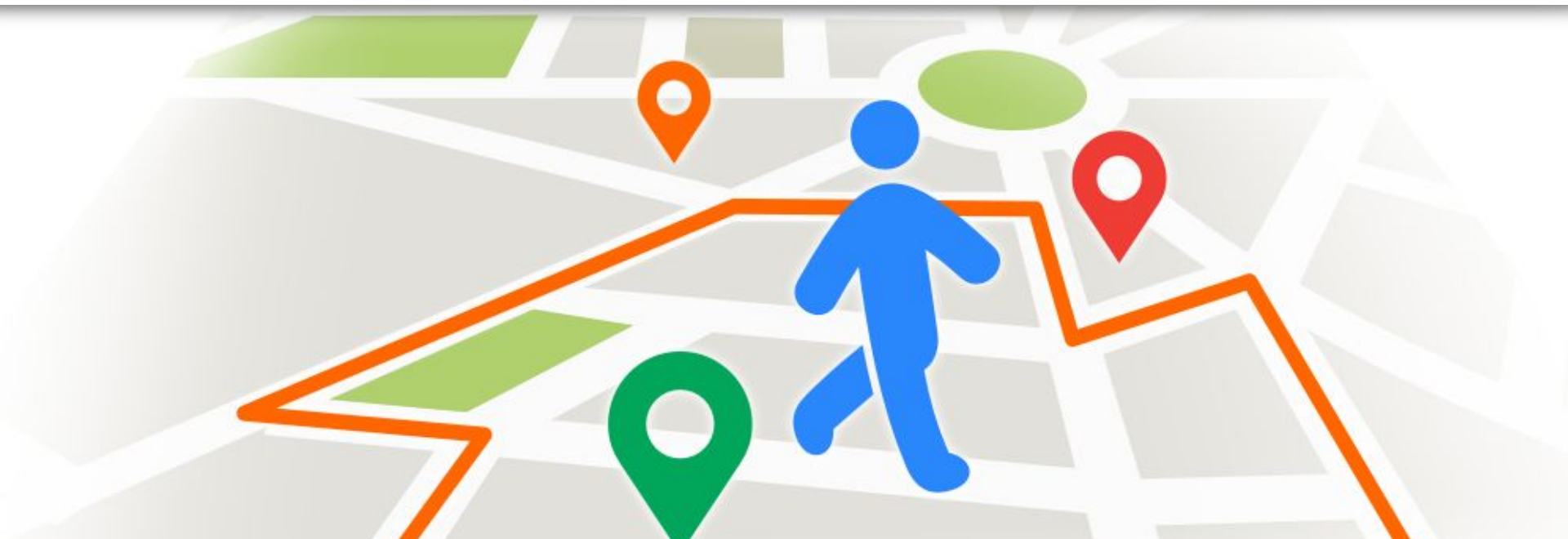
- Change "Color Track" to "by Speed"
- Mph is color coded for easy reference

InControl 2 GPS - Cellular coverage



Route Based cell signal strength information



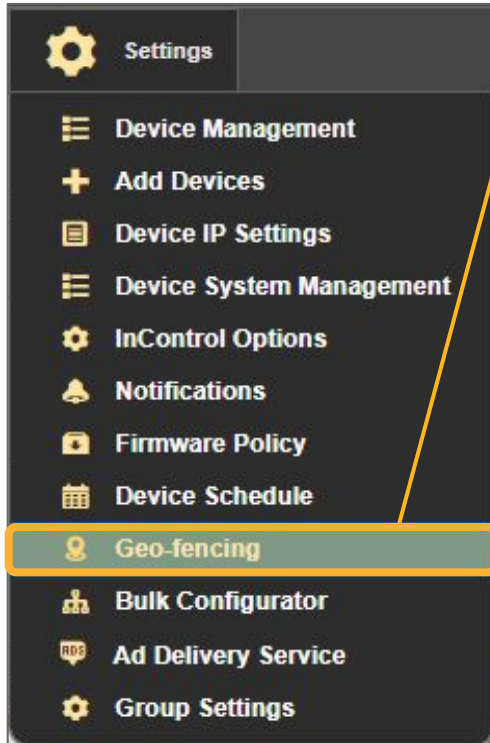


InControl 2 - Geo-Fencing

InControl 2 - Geo-fencing



Location based event triggers



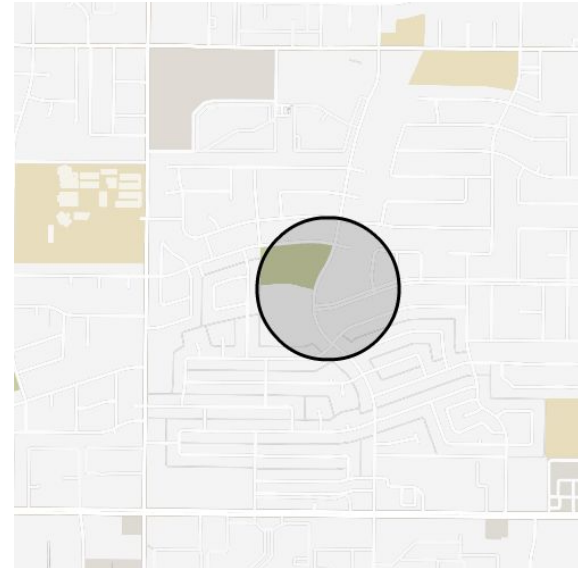
Geo-fencing: InControl 2 allows you to define an area by circle or outline a path on a map; when a device crosses that area, InControl 2 can trigger an action item

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



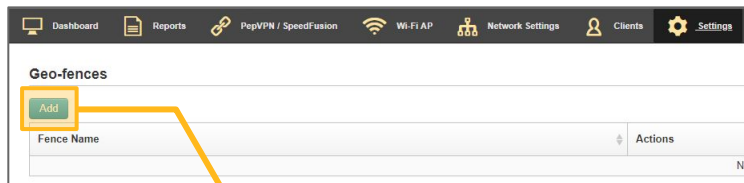
Option: Ring

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



Fence Name

Map

Zone: No data available

Add

☒ Ring
☐ Ring (CSV upload)
☐ Path

Perform Actions upon
Fence Modification or Device Addition

☒ All devices
☐ Yes ☒ No (Default)

Action: Email Notification
E-mail Notification ☐

Action: HTTP/HTTPS Notification
HTTP/HTTPS Notification ☐

Action: Enable/Disable Wi-Fi AP
Wi-Fi AP: No action

Action: Device Tagging
Device Tagging ☐

Note: upon a fence is created or modified, or newly applied on a device, by default, no action specified below will be performed until the device(s) enter/leave the fence. If you choose yes, the specified actions will be performed as soon as InControl receives the devices' next location points. E-mail notifications will be sent out for each of the devices if enabled.

Save **Cancel**

InControl 2: Geo-fencing



Option: Path

Fence 1

Map

Zone

Zone	Type	Delete
Test1	Path	

Add

Enable ☒

Apply Fence on... All devices

Action: Email Notification

E-mail Notification ☐

Action: HTTP/HTTPS Notification

HTTP/HTTPS Notification ☐

Action: Enable/Disable Wi-Fi AP

Wi-Fi AP No action

Save Cancel

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

Path: Test1

Path width 30 feet

Upload GPX file **Choose File** No file chosen

Please drag and drop a GPX file to the map.

Map

East Dr

East 72nd Street Playground

5th Ave

72nd St

Madison Ave

E 71st St

E 72nd St

Park Ave

Historic Landmark Preservation

Simon Capstick-Dale Fine Arts

Map data ©2017 Google Terms of Use Report a map error

OK Cancel

InControl 2: Geo-fencing



Triggered Events

The screenshot shows the configuration interface for triggered events in InControl 2. It features five main sections, each with a callout box and a line pointing to a specific element:

- Action: Email Notification**: Callout points to the "E-mail Notification" checkbox.
- Action: HTTP/HTTPS Notification**: Callout points to the "HTTP/HTTPS Notification" checkbox.
- Action: Enable/Disable Wi-Fi AP**: Callout points to the "Wi-Fi AP" dropdown menu.
- Action: Device Tagging**: Callout points to the "Device Tagging" checkbox.
- Tags to add on enter, remove on leave**: Callout points to the text input field for tags added on entry and removed on exit.
- Tags to add on leave, remove on enter**: Callout points to the text input field for tags added on exit and removed on entry.

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

