

# The Remote Access Point (RAP)

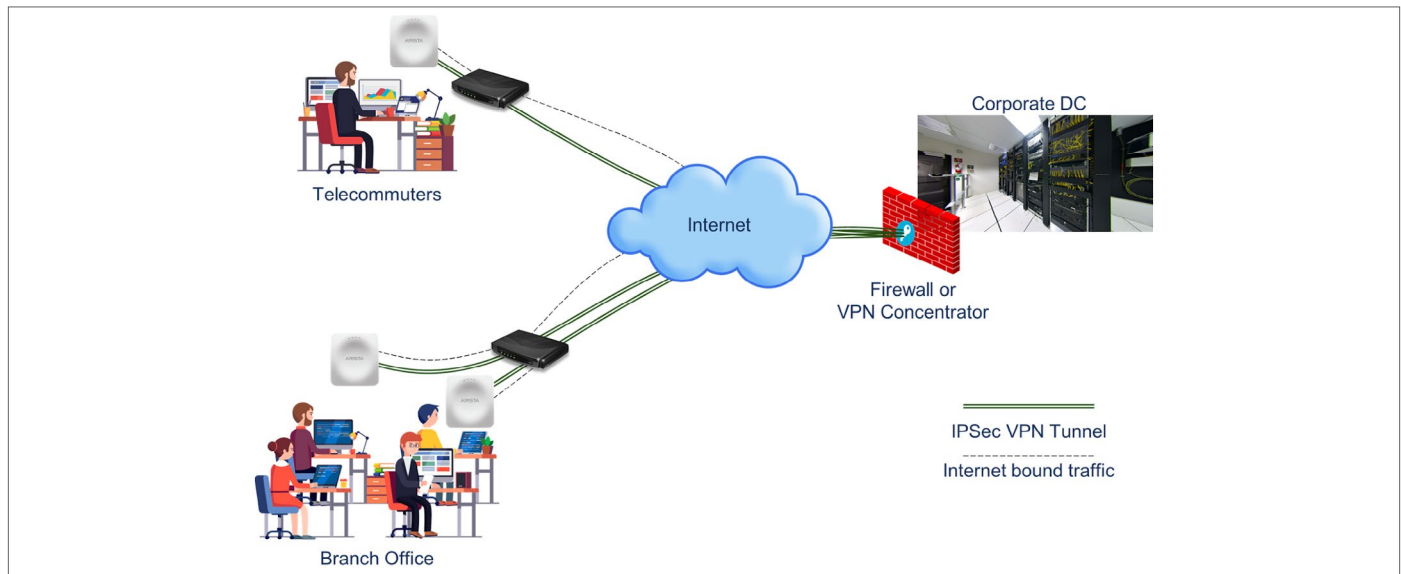
The Remote Access Point (RAP) solution empowers enterprise customers with the ability to extend Corporate SSID to a remote workplace such as a teleworkers' home office or a small remote branch office.

RAP offers the following benefits:

Enterprises	End Users
<ul style="list-style-type: none"><li>• Extension of the Enterprise SSIDs to the remote location with the same access controls and other policies.</li><li>• Unified management and monitoring of APs deployed in the enterprise as well as RWAP devices.</li><li>• Integrates seamlessly with industry standard firewalls. Hence, there is no need for additional investment.</li></ul>	<ul style="list-style-type: none"><li>• High-performance, enterprise-grade WiFi AP for employees working remotely from home or small branch offices.</li><li>• Secure access to corporate network resources for users at the remote workplace.</li></ul>

## RAP Overview

Arista's RAP solution uses industry-standard protocols to securely connect the AP deployed at a workplace with the Enterprise datacenter (DC) over the public Internet.



## Secure Access

By establishing an IPSec VPN tunnel from the AP to the DC, traffic to/from Wi-Fi endpoints, connecting to the Corporate SSID, is securely forward from/to the DC. This eliminates the need for VPN setup on each WiFi endpoint. Note that the RADIUS exchange between the AP and authentication server located in the DC is also tunneled.

## Flexible Data Forwarding

Leveraging Arista's flexible data plane architecture, only corporate traffic needs to be forwarded through the tunnel and Internet-bound traffic can be directly forwarded over the ISP network from the AP. This preserves precious VPN throughput at the head-end.

For operational flexibility, the following tunnel-SSID options are supported:

- One tunnel can be used for multiple SSIDs
- Each SSID can be defined with a separate tunnel

## Ease of Integration

The solution is designed to integrate seamlessly with industry standard firewalls from leading vendors such as Palo Alto, CheckPoint etc. It has been tested with the following firewall products:

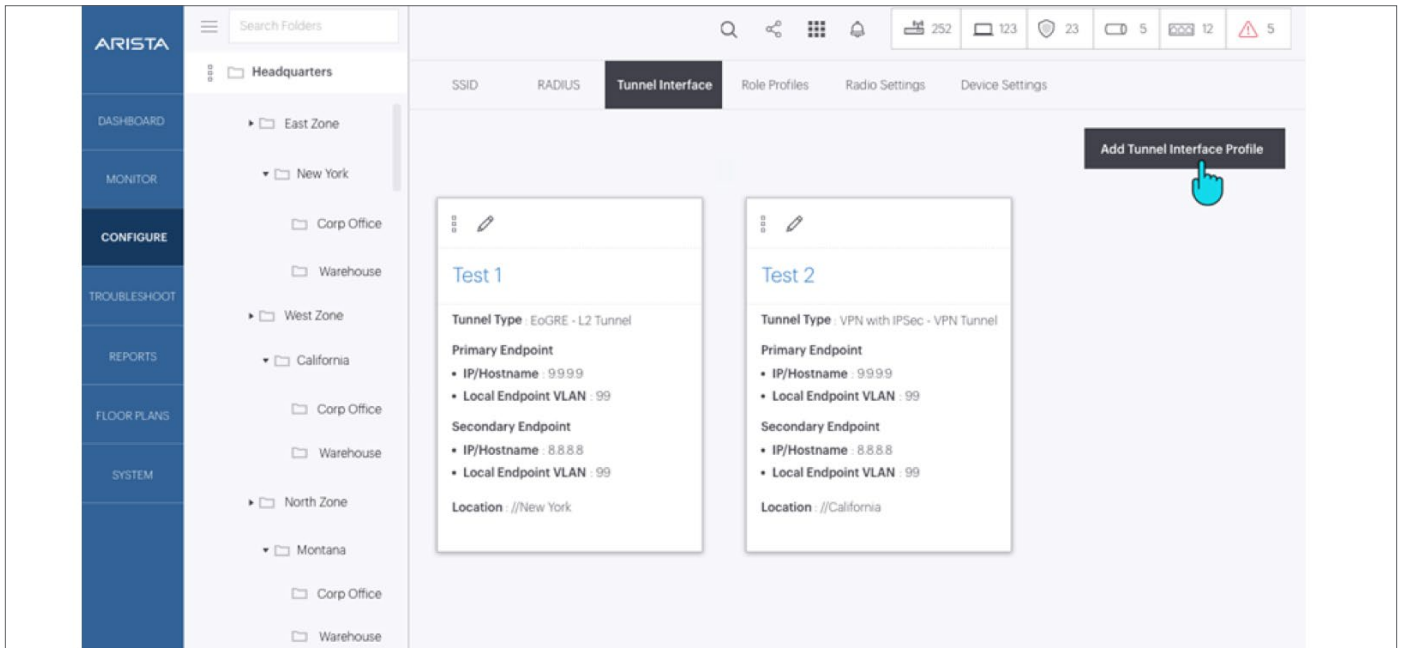
- Palo Alto PA220
- Juniper vSRX
- Cisco FirePower 1010
- CheckPoint SG1530
- FortiGate 30E

## RAP Configuration

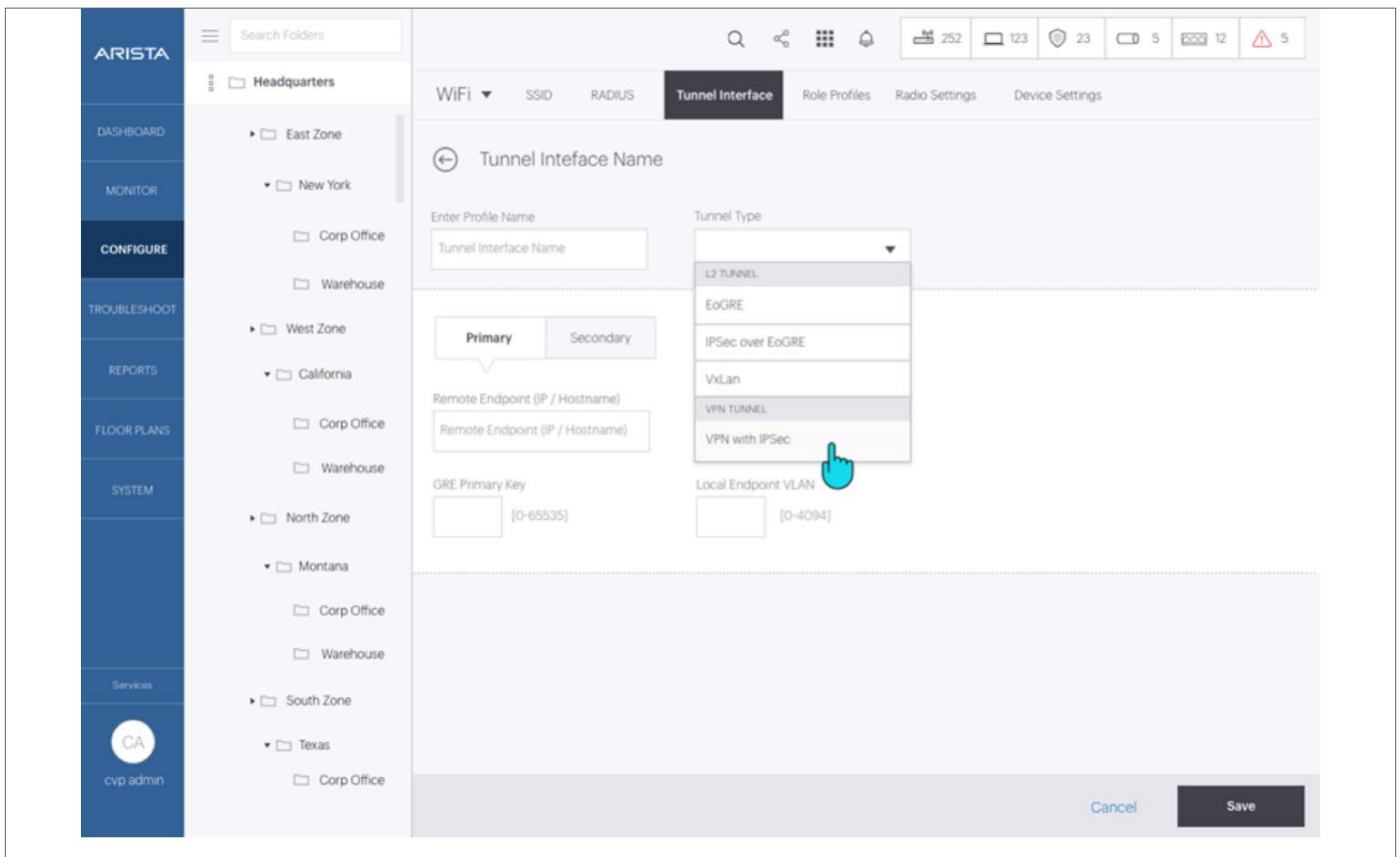
Just like any other Arista WiFi AP, the RAP device also needs to be provisioned first on the CV WiFi and then the RAP-specific configuration profile is created, as per the steps described below.

### Step 1: Create Tunnel Profile

Navigate to the Configure->Tunnel Interface menu in CV WiFi and click on 'Add Tunnel Interface Profile'.



From the dropdown for the Tunnel Type field, select 'VPN with IPsec' option.



Provide the VPN Endpoint details

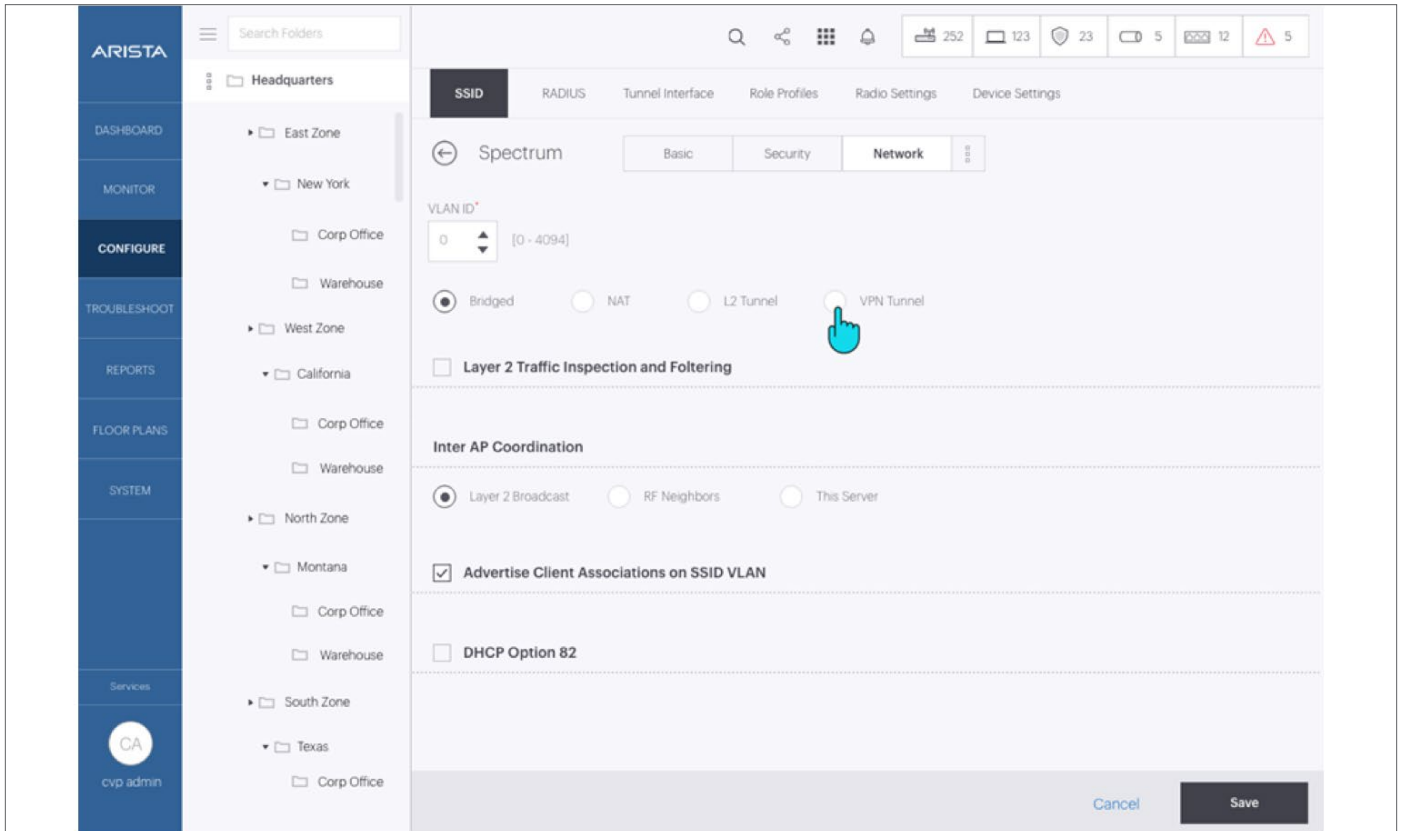
The screenshot displays the Arista configuration interface for a Tunnel Interface. The left sidebar contains navigation options: ARISTA, DASHBOARD, MONITOR, CONFIGURE (highlighted), TROUBLESHOOT, REPORTS, FLOOR PLANS, and SYSTEM. Below these are service icons for CA and cvp admin. The main content area is titled 'Tunnel Interface' and includes tabs for SSID, RADIUS, Tunnel Interface (active), Role Profiles, Radio Settings, and Device Settings. The configuration is divided into several sections:

- Tunnel Interface Name:** Includes 'Enter Profile Name' (Tunnel Interface name) and 'Tunnel Type' (VPN with IPsec - VPN Tunnel).
- Primary/Secondary:** Two tabs for interface configuration, with 'Primary' selected.
- Local Endpoint VLAN:** A text input field containing '0-4094'.
- IPSec:** Includes 'Remote Endpoint (IP / Hostname)' fields.
- Show Less:** A toggle to expand/collapse the section.
- Phase I Parameters:**
  - IKE Settings:** Includes 'Life time/IKE keep alive' (set to 6), 'Aggressive Negotiation Mode' (unchecked), and 'IKE Version' (IKE Version 2 selected).
  - Local/Remote Authentication:** Two side-by-side boxes for 'AP Authentication Method' (PSK), 'Identifier', and 'PSK Key input'.
  - Combination of Cipher:** A row of dropdowns for 'Cipher Algorithm' (Any), 'Cipher Length' (128), 'Hash Algorithm' (Any), and 'DH Group' (Any).
- Show Less:** Another toggle for the Phase I section.
- Phase II Parameters:**
  - IKE Settings:** Includes 'Life time/Phase two keep alive' (set to 3).
  - Combination of Cipher:** Includes radio buttons for 'ESP' (selected) and 'AH', and a row of dropdowns for 'Cipher Algorithm' (Any), 'Cipher Length' (128), 'Hash Algorithm' (Any), and 'DH Group' (Any).

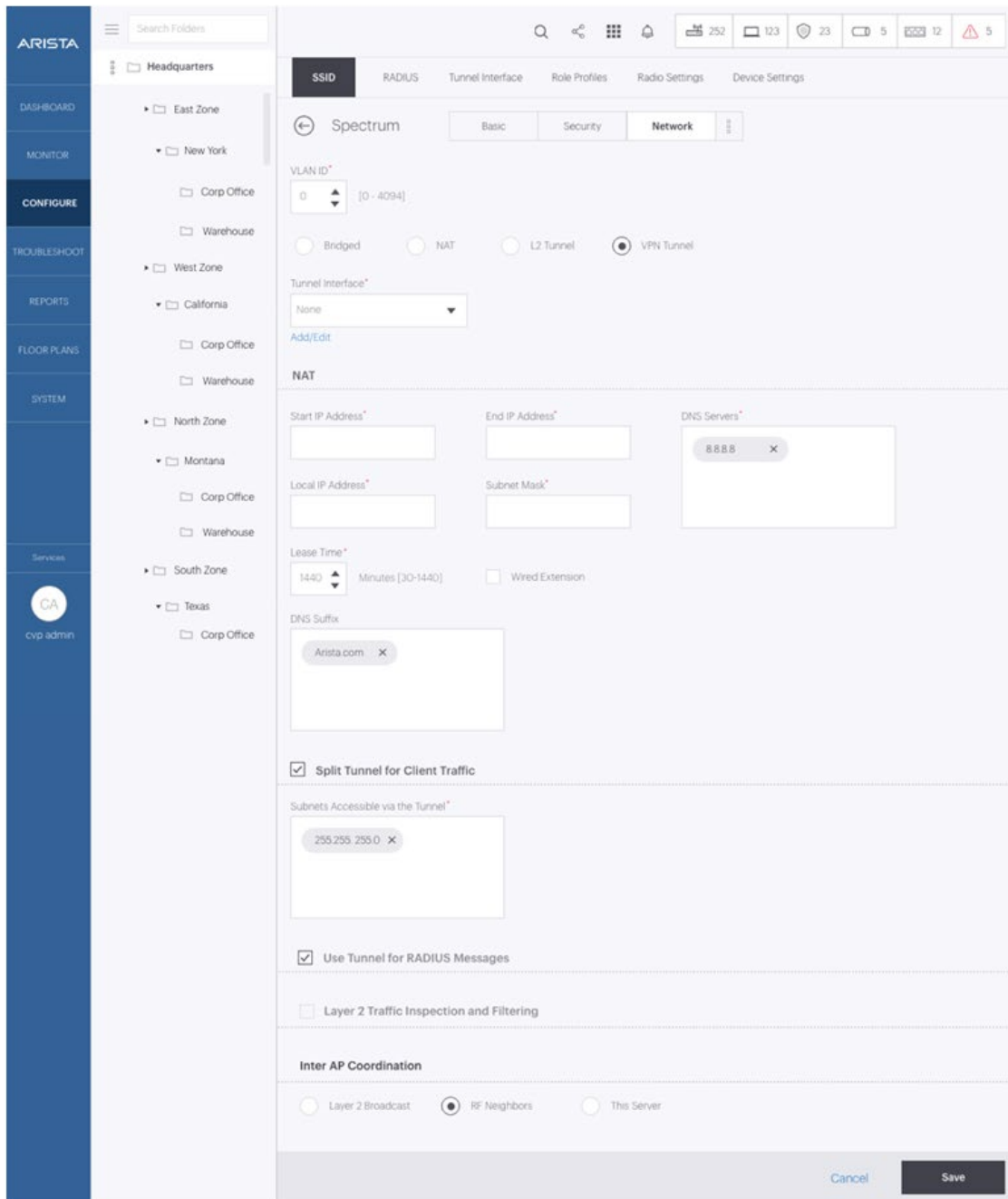
At the bottom right, there are 'Cancel' and 'Save' buttons.

## Step 2: Add the Tunnel to SSID Profile

Navigate to Configure->SSID and open the 'Network' configuration tab. Select 'VPN Tunnel' option.



This will result in display of additional configuration parameters. In the 'Tunnel interface' dropdown, select the tunnel defined in Step 1. Specify the NAT parameters for the SSID.



The following two additional options may also be enabled if required:

Split Tunnel for Client Traffic

Use Tunnel for RADIUS Messages

**Santa Clara—Corporate Headquarters**

5453 Great America Parkway,  
Santa Clara, CA 95054

Phone: +1-408-547-5500

Fax: +1-408-538-8920

Email: [info@arista.com](mailto:info@arista.com)

**Ireland—International Headquarters**

3130 Atlantic Avenue  
Westpark Business Campus  
Shannon, Co. Clare  
Ireland

**Vancouver—R&D Office**

9200 Glenlyon Pkwy, Unit 300  
Burnaby, British Columbia  
Canada V5J 5J8

**San Francisco—R&D and Sales Office 1390**

Market Street, Suite 800  
San Francisco, CA 94102

**India—R&D Office**

Global Tech Park, Tower A & B, 11th Floor  
Marathahalli Outer Ring Road  
Devarabeesanahalli Village, Varthur Hobli  
Bangalore, India 560103

**Singapore—APAC Administrative Office**

9 Temasek Boulevard  
#29-01, Suntec Tower Two  
Singapore 038989

**Nashua—R&D Office**

10 Tara Boulevard  
Nashua, NH 03062



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