

# Branch on Demand

Extending and Securing Access Across the Organization



## Extending Access to Corporate Resources Across the Organization

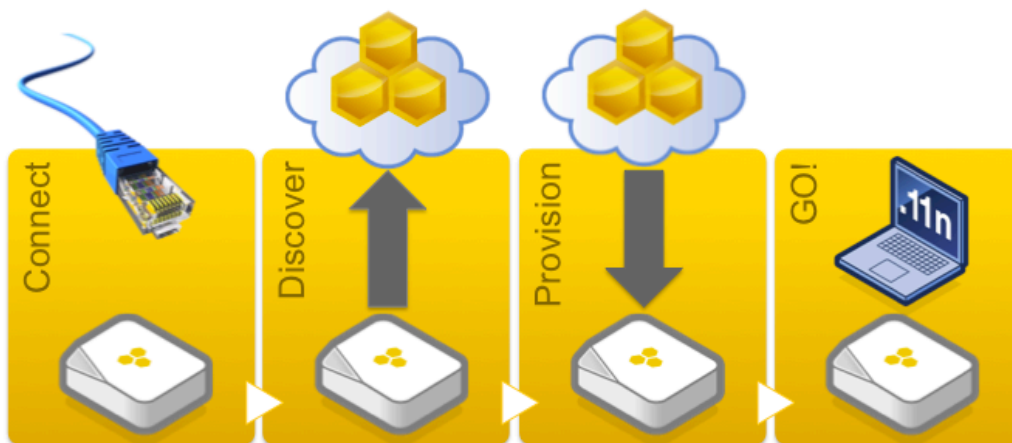
As organizations extend corporate capabilities to teleworkers and branch offices, the added infrastructure and complexity can greatly increase costs and the burden on network administrators. This extra infrastructure usually requires support and maintenance in locations that lack IT staff and is difficult to deploy, configure, and secure consistently—even by skilled IT teams.

The Aerohive Branch on Demand™ solution makes it easy to deploy corporate capabilities to employees anywhere, while reducing operational costs. The key lies in a suite of features and functionality designed specifically for remote environments that simplify operations, enforce security policy, reduce costs, and operate virtually maintenance-free.

### Fast, Easy Configuration and Deployment

Remote employees are often not tech-savvy, and branch offices usually lack onsite IT staff, so remote wireless solutions have to be straightforward to install and configure. The Aerohive Branch on Demand solution allows anyone to simply plug in an Aerohive branch router, wait a few minutes for provisioning to be completed, and immediately access necessary resources.

Figure 1 – Zero Touch auto-provisioning removes any need for technicians onsite or truck rolls.



Aerohive eliminates the need for console cables, technical certification, or individual Secure Socket layer (SSL) virtual private network (VPN) clients to be installed on every connecting device.

## Branch On Demand™

Aerohive's Branch on Demand™ solution redefines the economics, control, and performance of small branch and teleworker connectivity by leveraging our patent-pending Cloud Services Platform to deliver a "Headquarters-like" network to every user regardless of location.

### Router—BR100/200

Branch Router with built-in 802.11n



### VPN Gateway—CVG

VMWare-Compliant VPN Gateway



### Cloud Services Platform

Integrated Cloud-based Services

**websense**

**BARRACUDA**  
NETWORKS

**OpenDNS**

Pre-configuration is unnecessary, because the highly intelligent Aerohive Cloud redirects every Aerohive device to its world-class HiveManager management platform, regardless of whether HiveManager resides in the Aerohive Cloud or on the local premises. Administrators simply:

- Create a configuration
- Provide parameters for branch routers to acquire the configuration
- Wait for remote users to plug in devices

Once a device comes online, HiveManager automatically pushes the configuration to it—and the teleworker is up and running without requiring any administrator intervention.

### Centralized Management and Visibility

When you deploy thousands of remote devices, they have to be easy to manage, maintain, and monitor. Typical remote solutions require multiple consoles for managing remote connectivity, security, and troubleshooting. However, HiveManager provides a centralized interface that enables administrators to easily configure any number of Aerohive access points and branch office devices. An administrator can manage thousands of devices as easily as one. HiveManager provides everything from integrated IP Address Management, to auto-provisioning and consistent policy deployment across all Aerohive devices.

### Deployment Flexibility

With Aerohive Branch on Demand solutions, administrators have ultimate control over access to resources. They can define which users and devices can access a branch router, as well as provide access to specific local and remote resources for each connected user. The Aerohive BR100 router supports:

- Up to eight Service Set Identifiers (SSIDs) for wireless deployments
- 6 distinct VLANs shared across wired and wireless interfaces
- Authentication such as 802.1X, captive web portal, and Aerohive Private Pre-Shared Key to distinguish users

Administrators can configure customized access based on identity to apply firewall policies, VLAN assignments, tunnel permissions, and Quality of Service (QoS) to users or devices.

### Consistent Security and Compliance

Consistent, reliable security is a requirement for large-scale distributed networks. However, dedicated branch routers and security licenses are too expensive for small offices or individual teleworkers, and a software client does not always provide sufficient coverage, especially when corporate voice connectivity is needed.

Aerohive Branch on Demand solutions use a patented N-Way Cloud Proxy feature to provide enterprise-class security at a telecommuter price point. With Cloud Proxy, an administrator can use a cloud-based security service, such as Websense or Barracuda Online, and route all remote

web traffic through the service before sending it to its final destination. HiveManager also delivers high visibility through extensive logs and compliance reports.

### Unified Wired and Wireless Policy

Branch deployments need policy for users and all types of devices with the assurance of access regardless of access medium. With HiveManager, an administrator can create customized access policies, based on identity and device type, which in turn can assign firewall, tunneling, network, and queuing permissions to any user/device regardless of the user's location or access medium. HiveManager also provides complete visibility for:

- Users and devices connected to any Aerohive network device
- Permissions assigned to each user/device
- Historical device reporting, even if it moves between wired and wireless access environments

### Teleworker Environments

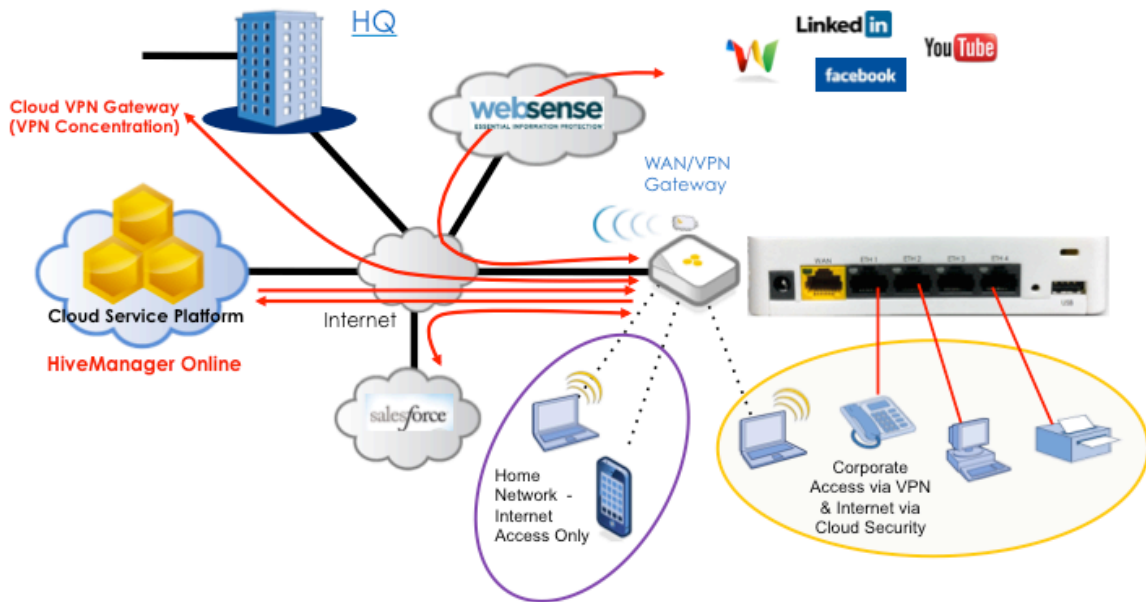
Teleworking continues to grow in popularity as enterprises use it to reduce capital and operations costs associated with offices, parking structures, and other facilities. Teleworking also helps organizations achieve their sustainability goals and provides a cost-effective benefit that helps recruit and retain top talent. In fact, Robert Half International found that of 1,400 CFOs surveyed about the popularity of teleworking in their corporations, 46 percent said that teleworking is second only to salary as the best way to attract top talent and 33 percent said it is the top draw!

Successful teleworking deployments deliver consistent, persistent access to the same resources that workers would use at the corporate office. This includes voice, teleconferencing, secure Internet connectivity, and cloud-based services or applications, such as *salesforce.com*. The Aerohive Branch on Demand solution provides standards-based IP Security (IPsec) VPN functionality to access corporate resources, as well as patent-pending Aerohive Cloud Proxy (N-Way Split Tunneling) to ensure the integrity of web traffic by integrating with cloud-based security vendors, such as Websense and Barracuda.

Aerohive has seamlessly integrated remote routing functionality into its industry-leading, cloud-enabled networking architecture to provide easy-to-manage, secure, and reliable connections to teleworkers.

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Figure 2: A typical installation of the Aerohive Branch on Demand teleworker solution



In this example, HiveManager provides easy configuration, monitoring, and troubleshooting for teleworker devices. The BR100 router discovers HiveManager using configured options or by querying the Aerohive Cloud for its assigned HiveManager, regardless of whether that HiveManager is in the cloud or on a customer premises. Aerohive has also introduced the Cloud VPN Gateway, a VMware-based appliance that terminates IPsec tunnels from Aerohive branch router devices. The Cloud VPN Gateway can scale based on the hardware dedicated to the VMware server and does not rely on HiveManager for connectivity.

This teleworker scenario configures the BR100 branch router with multiple SSIDs. For example, one SSID is used for employee access using 802.1X and another SSID is for guest access using a pre-shared key. Four 10/100 LAN ports are also configurable to share a VLAN with a wireless SSID, as well as be protected by a Captive Web Portal.

Traffic from authenticated employees can be routed across the VPN tunnel, as well as assigned to a priority QoS queue, separate from associated guest traffic. An administrator can configure the BR100 branch router to separate web traffic not destined for the VPN tunnel and send it through the Aerohive Cloud Proxy service to a remote security service. A wireless Service Level Agreement (SLA) can be configured to ensure that wireless access performance meets a sufficient standard for remote application access, and to automatically boost airtime for a user if the SLA is not met.

## Small Branch Offices

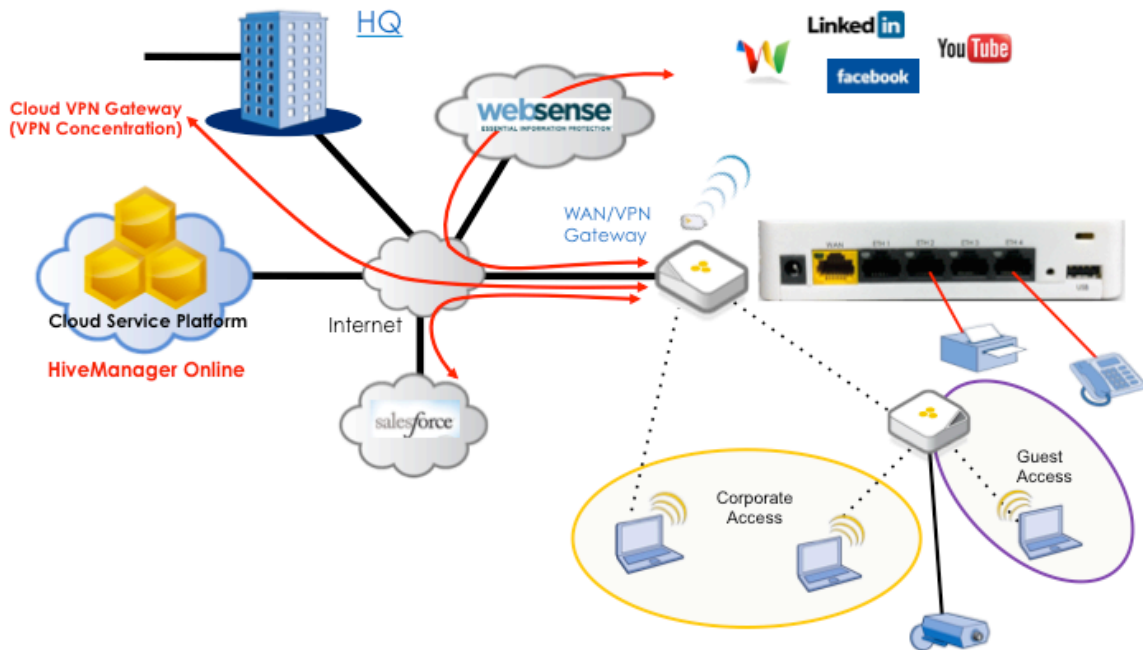
Traditional branch-office VPN solutions generally add cost, complexity, and confusion to each location. Although small branch offices represent about 20 percent of IT infrastructure, they often require 80 percent of IT's maintenance resources. Software solutions are less expensive, but

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quickly become unmanageable or inadequate when multiple devices or devices that cannot support VPN clients want to connect.

Through the cloud, the Branch on Demand solution simplifies provisioning, management, monitoring, and troubleshooting for branch office deployments, even without technical resources onsite. Enterprises can achieve significant CAPEX and OPEX savings while maintaining visibility into remote networks, meeting security objectives and compliance standards, and increasing productivity.

Figure 3: A typical Aerohive Branch on Demand branch office implementation



In small office deployments, reliable access to the central office, as well as secure Internet access for online applications and resources, is paramount. The Branch on Demand solution uses the Aerohive Cloud to quickly and securely discover the HiveManager, regardless of whether HiveManager is online or local.

Many branch offices, especially those subject to stringent compliance requirements like retail stores, will want to secure the BR100 branch router in a wiring closet while still providing wireless access to the rest of the property. Aerohive makes it easy to extend wireless access by allowing an administrator to connect Aerohive APs via mesh to the BR100 branch router. Then they can configure the APs to support multiple VLANs and user profiles and deploy a single policy to the entire location. This approach allows users to connect to any available access point and receive the correct permissions, based on their identity or device type.

User traffic can be routed across the VPN tunnel or to the Internet based on classic routing and firewall permissions. The Branch on Demand software also can separate "trusted" web traffic that should go directly to the Internet, and the Aerohive Cloud Proxy can allow an administrator to force all other web traffic to traverse an online security service.

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Because all Aerohive devices support the Aerohive Mobility Routing Protocol (AMRP), a user can easily and securely roam between connected access points and the branch router as needed. Secure access for guests can be separated from corporate traffic and subjected to different network, QoS, time-of-day access schedules, firewall policies, and web security settings, along with many other Aerohive features.

### For More Information

Aerohive Branch on Demand solutions now make it easier and more cost-effective to implement wireless access to corporate resources everywhere—from the home office to branch offices and teleworkers. For more information about the Branch on Demand solution, visit <http://www.aerohive.com/solutions/applications/enterprise.html>.

## About Aerohive

Aerohive Networks reduces the cost and complexity of today's networks with cloud-enabled, distributed Wi-Fi and routing solutions for enterprises and medium sized companies including branch offices and teleworkers. Aerohive's award-winning cooperative control Wi-Fi architecture, public or private cloud-enabled network management, routing and VPN solutions eliminate costly controllers and single points of failure. This gives its customers mission critical reliability with granular security and policy enforcement and the ability to start small and expand without limitations. Aerohive was founded in 2006 and is headquartered in Sunnyvale, Calif. The company's investors include Kleiner Perkins Caufield & Byers, Lightspeed Venture Partners, Northern Light Venture Capital and New Enterprise Associates, Inc. (NEA).



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