



Miercom



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Netgear Insight Pro

NETGEAR®

Network as a Service (NaaS)

DR190226H

Competitive Analysis of SMB Cloud Controllers

MIERCOM.COM

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Executive Summary

Each year, networks include more wired, wireless and storage devices – which require quick, easy and effective deployments through a central cloud management platform. Cloud-based controllers are used to centrally configure, monitor and troubleshoot all network devices, such as routers, switches, access points and storage devices.

Offering networking services can be costly and challenging for small business and managed service providers (MSP), and there is need for a platform to empower MSPs to deliver end-to-end installation while also providing remote configurations and management across all locations and organizations.

The need for cloud-managed solutions becomes more critical as the number of managed devices and endpoints grows. A cloud network solution's functionality can strongly impact downtime, efficiency, reliability and user experience. In the past, SMB networks were mostly locally based. Now utilizing cloud storage, those networks with cloud Network as a Service (NaaS) capabilities can be considered cutting-edge in the marketplace where remote access is vital.

Netgear engaged Miercom to competitively assess its latest Cloud Management Solution offering – Insight Pro cloud management and devices – against Cisco Meraki and Ubiquiti products. After conducting hands-on testing and analysis in different areas including: management architecture, deployment, reporting, product support and total cost of ownership, Netgear Insight Pro was recognized as one of the best solutions available to SMB markets and MSPs. Here are the keys findings observed during the tests:

Key Findings

- **Insight Pro offers plug-and-play set up as well as multi-tenant, multi-location support.**
 - **Insight affords the ability to distribute workloads across multiple roles such as: administrators, IT managers and business owners.**
 - **Complete networking solution for SMBs across routing, wired and wireless networking and storage devices.** Insight pro provides quick and remote setup for SSIDs, captive portals, switch port settings, PoE scheduling, VLANs, LAG, VPN connections, remote VPN users, scheduled firmware updates, implement effective management and more from a central dashboard.
 - **The single pane-of-glass management is easy to use and efficient for creating SMB organizations and sites, regardless of geographical location.** Subscriptions and hardware are simple to apply to each organization's site and movable if necessary. Administrators can control access roles for each business owner.
-

- **Powerful built-in wizard assists MSP administrators with a struggle-free experience.** When handling network control, organization creation and configuration, a step-by-step wizard is a life-saver for reducing time, manpower and frustration for cloud-based Insight devices.
- **Fully functional Android and iOS mobile application support.** Unlike its competition, Netgear Insight Pro offers all the same functionality through its mobile application as it does its desktop version – great for administrators on the go.
- **Time-saving deployment measures.** It takes a mere 10 minutes to get an entire SMB organization connected through Insight Pro for the first time. There are three ways to add devices: scan QR/Barcode, type in the product serial number, or scan the local network to claim devices. Configurations can be copied for multiple locations with just one click, and its streamlined GUI outperforms its competitors in its simplicity, clarity and resources.
- **Wide range of metrics viewable through logging and reports.** The administrator has full visibility and auditing control of connected Insight Pro devices. Reports can be automated, and notifications can be pushed to let organization managers know when to take action.
- **The GUI provides a wealth of documentation and support.** Each Insight Pro product has documentation and training available. Further offered services are phone, chat, email and online community support. Users can start a support case, and escalate it, right through the application.
- **First-year deployment value outweighs its competitors.** The first-year purchase of Insight Pro devices and Network as a Service (NaaS) subscription – with configurations, monitoring, management, firmware updates and troubleshooting – helps widen profit margins for SMB organizations with a flexible, affordable subscription plan. Its higher quality and functionality, paired with a lower cost, make the start-to-finish product experience unlike any other vendor tested.

Based on our observations, we found that the Netgear Insight Pro product line and cloud-based control provided the best value and very efficient "ground-up", multi-tenant, multi-location platform for central management of SMB sites. Its functionality is representative of the expansive shift towards cloud-based solutions which reduce cost while providing more value than its competitors, earning the ***Miercom Performance Verified*** certification.

Robert Smithers
CEO
Miercom



Introduction

What this report covers

This report focuses on Cloud Management Solutions of Netgear, Cisco Meraki and Ubiquiti. Miercom engineers evaluated the ability to register, discover, monitor, manage and remediate SMB network devices with the subscriptions, hardware and resources available through a typical deployment scenario and multiple use cases.

A cloud-based Network as a Service (Naas) allows for both on-site and remote management by a Managed Service Provider (MSP) of multiple organizations with single-site or multi-site locations, using customizable, role-based permission settings. This report delves into the capabilities of each vendor's cloud-based Naas solution, comparing them to one another, to determine whether each product delivers scalable, efficient functionality based on the scale of: Excellent, Very Good, Good, Fair and Poor.

The main areas covered are: management, deployment, reporting, product support and value. We highlight areas where the Netgear Insight Pro solution outperforms its competitors to provide scalable, centralized, efficient and cost-effective functionality.

Products Tested

NETGEAR®

Insight Pro
Switch: 1 x GC110P
Router: 2 x BR500
Access Point: 2 x WAC 505
1 x Ready NAS



1 x Meraki Dashboard License
Access Point: 1 x MR20 with License
Switch: 1 x MS120-8LP-H with License
Router: 2 x MX64 with License



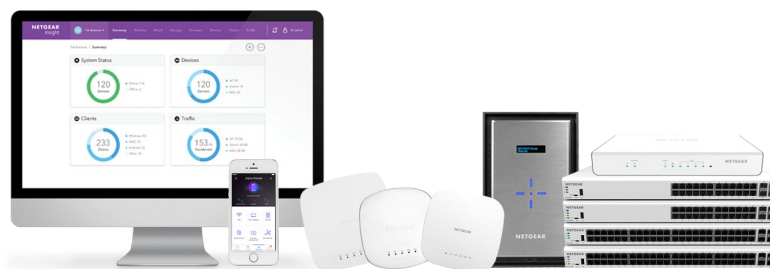
1 x UniFi License
1 x Cloud Key: UC-CK
Switch: 1 x US-8-60W
Router: 2 x USG-PRO-4
Access Point: 2 x AP AC LITE

Netgear Insight Pro

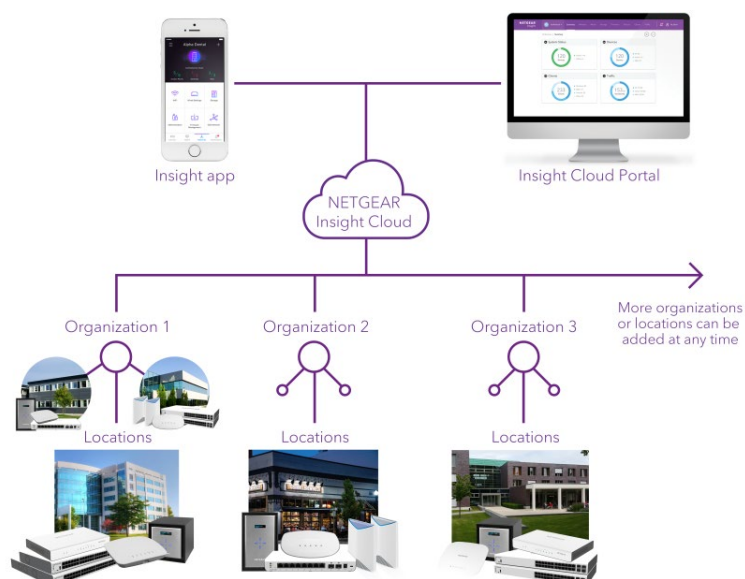
Netgear Insight Pro products leverage cloud technology to allow MSP administrators to have real-time control of on-site and remote organizations for efficient, cost-effective management. Its sleek design is concise, transparent and simple – "one-touch" installations of devices takes just seconds so that organizations can have an entire secured network set up in minutes. Viewing all devices is easy; the single pane-of-glass graphical look at registered devices saves IT management time and money which is better spent on business activities.

This low-cost, multi-function solution allows administrators to have seamless, effortless control over a complex system right at their fingertips. The Insight Pro is a dedicated management subscription that can be accessed via its cloud portal on both desktop and mobile devices to oversee organizations on the go – anytime, anywhere, from any geolocation.

The Insight Pro subscription provides unlimited registration of Netgear Insight devices to provide a highly scalable and automatable management service to grow with expanding numbers of organizations under a single MSP administrator.



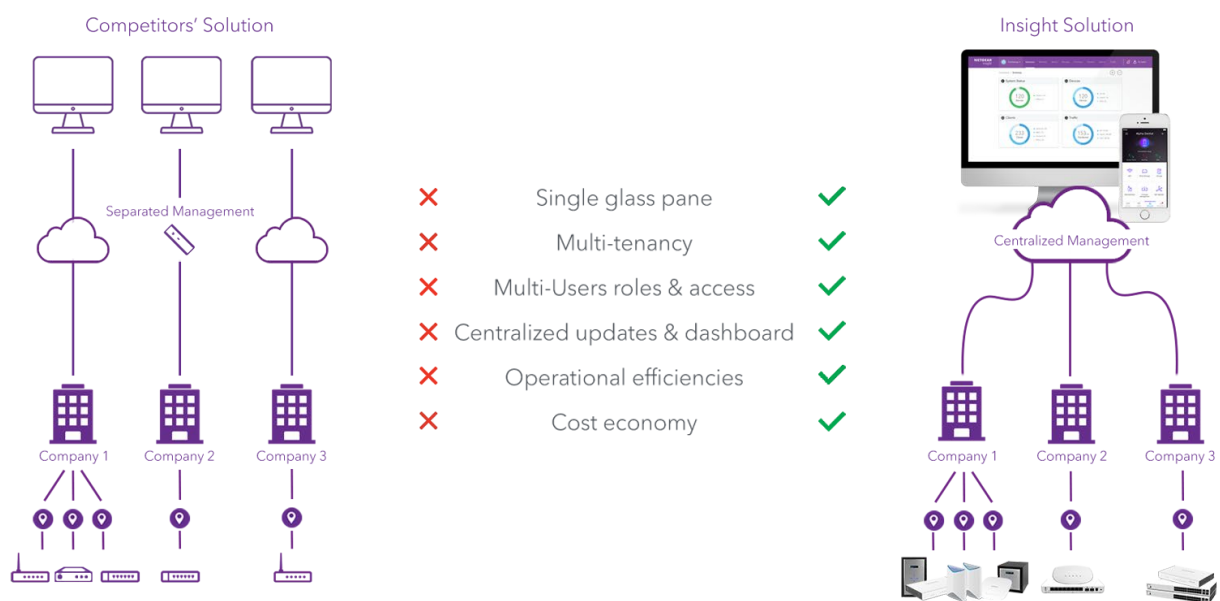
Source: Netgear



Source: Netgear

What makes Insight Pro products unique?

These fully functional, standalone Netgear devices work right out of the box. There is no need for keys, dongles, additional software PC clients, licenses or fees. Purchase the device and a multi-device annual subscription, and you're ready to go. These cloud-based devices also eliminate the need for proxies, tunnels and/or special software as well. And unlike its competitors, Insight Pro offers Network Attached Storage (NAS).



Source: Netgear

The multi-tenancy, multi-location accounts can be centrally managed with multi-role control by the MSP administrator, IT manager or business owner through the cloud portal and mobile application.

Devices are easily deployed at any one of an organization's locations using straightforward setup and configurations, while also providing automated updates and reports, real-time email, and application push notifications.

Other features include:

- Two-factor authentication
- Firmware update scheduling
- Simple Wi-Fi and wired setup for both private and Guest Wi-Fi networks
- Sufficient depth of functions to cover VLANs, PoE schedules and wireless coverage optimizations

1

MANAGEMENT

1.1 Management Architecture

1.2 Ease of Navigation

1.3 Accessibility

1.4 Management Automation

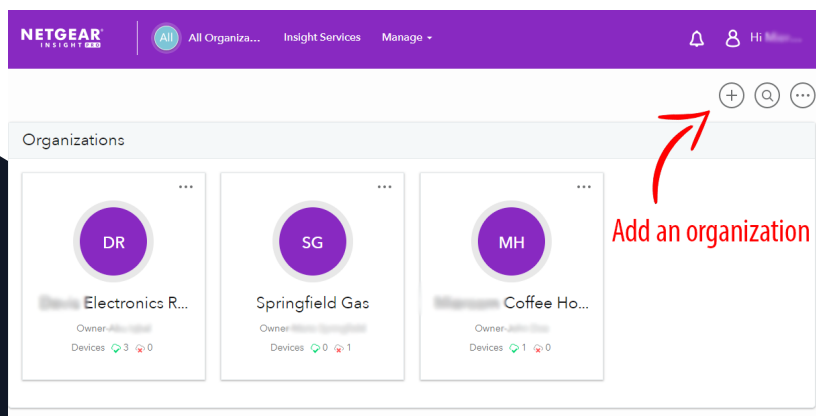
1.1 Management Architecture

The architecture of the management solution requires multiple aspects such as combined product management and a logical architecture that benefits the end user. This requires single pane administration with multi-tenancy for different customers. The architecture should be well configured for administrative management, local organization administrators (read-write), or local organization managers (read-only). Local administrators and managers require segmented interface access limiting read-write access to products applicable to their infrastructure.

How easy is it to create organizational users and permissions?

Netgear Insight Pro: Excellent

User creation is done easily via email invitation. Netgear works by creating an organization and location with an assigned business owner. The business owner receives the invitation and gains permission to view the dashboard, device status and location status. The owner cannot create locations or add devices unless granted administrative rights with read/write access.



Cisco Meraki: Fair

Organizational users are easily created in the dashboard, and organization locations can be added into the user's rights. The user receives an email, sets their password and has access to the monitored organization. Specific organization administration is functional but does not allow other organizations to be added via the same interface. Its read-only dashboard allows user access, but no changes can be saved. The alert for changing or attempting to save is not fully functional either.

Ubiquiti: Fair

Ubiquiti is not set up like Netgear and Meraki, using an Organization-Location model. An administrator makes a list of "sites" (locations) and gives users access to these sites – one at a time – and have read-only or administration-level privileges. The user can only view the site they are assigned to.

If looking to organize sites, as Netgear and Meraki do, a separate cloud controller would have to be purchased for each "organization".

How are licenses applied?

Netgear Insight Pro: Excellent

Insight Pro is licensed through an annual subscription which comes with per-device credits. With a Netgear Insight Pro subscription, you receive an email with a registration link and a purchase confirmation key. The key specifies the number of device credits available for your subscription and corresponding expiration dates. Device credits that are supported under a subscription apply to Insight managed devices only. The license in this test case was 10 device credits for all organizations.

Cisco Meraki: Fair

Licensing must be split by organization, and licenses for each individual device are required. For instance, the MX64W license does not work with the MX64 device. Additionally, license splitting was observed when Miercom received a single license key - tied to two access points and one switch. Each license needed to be applied to a different organization, but to transfer licenses you need to use over-the-phone technical support. While it appears a user could set up all organizations as different networks and partition access via administrative network access, the MSP portal is not available for this scenario.

Ubiquiti: Fair

Ubiquiti's UniFi Cloud licensing is applied on a per-device basis. Licensing is tiered in bundles (e.g. 10, 20 or 500 devices). Separate license packs are required for per-site cloud controllers, which can affect the efficiency of license implementation.

How easy is it to move hardware to another organization?

In this use case, two switches are swapped between two organizations. Each solution was assessed for the process of hardware movement.

Netgear Insight Pro: Good

It is possible to move a device from one organization to the other. A device was successfully moved from the branch to the headquarters and appeared in the headquarters site's dashboard of devices.

Cisco Meraki: Fair

Hardware can be moved to another organization, but it requires an alteration to licensing. The license assigned to the other organization must be transferred by Meraki technical support, or a new license is needed.

Ubiquiti: Fair

Since Ubiquiti does not support a multi-organization model, hardware swapping can only be done from site to site using the "Forget This Device" tab of the configuration settings. Having multiple organizations requires additional purchasing of cloud controllers, raising total costs.

How easy is it to move hardware within an organization?

In this use case, two switches are swapped within an organization. Each solution was assessed for the process of hardware movement within the network.

Netgear Insight Pro: Excellent

To swap hardware, you simply remove any device from the location (e.g. headquarters) and add to a new location (e.g. branch).

Cisco Meraki: Excellent

Network hardware can easily be moved within an organization without affecting management.

Ubiquiti: Good

Network hardware can be easily moved between sites via a "Forget This Device" tab of the managed device configuration settings in the side property panel. Since UniFi uses a site-based model, moving hardware can be challenging since separate cloud controllers and licensing are required.

How easy is it to create multiple organizations?

Netgear Insight Pro: Excellent

An MSP can add any organization and location. It only requires an email notification to the business owner(s). The administrator has full access to all the organizations, locations and devices created. The Insight Pro administrator can add, modify or delete any business owner, manager or devices.

Cisco Meraki: Good

To create a second organization, the administrator simply goes to the Meraki login page and creates a new account with the same information as the first. This links the organizations, and the MSP portal becomes visible for the two organizations created. Additional organizations can be added with the "Add Organization" button in the MSP portal.

Ubiquiti: Poor

Organizations are not supported. Only sites (locations) can be created, and users are assigned individually to one or more sites. To have multiple organizations requires additional cloud controllers for each.

Can the main administrator have full control over all organizations?

Netgear Insight Pro: Excellent

The Insight Pro account can centrally manage all organizations from a single pane-of-glass interface. The MSP administrator has full visibility and control over all organizations, locations and devices through one screen. This control may also be shared with an IT manager with administrative access.

Cisco Meraki: Excellent

All organizations can be accessed by the administrator, with full control of settings for specific organizations.

Ubiquiti: Good

The main administrator can see all sites created under the cloud controller. They can also see all the settings and options for an organization when accessing the specific site. However managing devices across an entire organization is challenging, as Ubiquiti is suited for site-specific management only.

Can the administrator grant specific controls based on role?

Netgear Insight Pro: Excellent

Administrators can add, modify or delete any business owner, manager or device. Adding a person requires a simple email.

Cisco Meraki: Excellent

Both administrative and read-only users can be created. Access can be granted to administrative users for either full organization or network segments.

Ubiquiti: Poor

This functionality was not observed as a consequence of the inability to add users. While the settings to add a user exist, they could neither be validated during the time of testing nor resolved by the standard technical support package.

How easy is administrative control as an organizational user?

Netgear Insight Pro: Excellent

The administrator can provide read-only access to the business owner to provide more visibility and can provide read-write access to IT managers to divide workload across organizations. If the organizational user has an administrative role, they can perform actions such as add a device, modify an access point, add any SSID, and more.

Cisco Meraki: Excellent

Users can have administrative rights, but with limited access as set by the MSP administrator.

Ubiquiti: Poor

This functionality was not observed as a consequence of the inability to add users. While the settings to add a user exist, they could neither be validated during the time of testing nor resolved by the standard technical support package.

Can the main administrator lock out organizational users?

Netgear Insight Pro: Excellent

The administrator can remove any manager by deleting them. Likewise, to block an organization you need to delete it. But the administrator can stop push notifications and email updates to any organization owner or manager in the event of an issue.

Cisco Meraki: Good

Organizational users can be easily deleted or have access changed. The alteration takes effect very quickly. There is no option for temporary lockout, but access can be manually changed to "None" while maintaining the user in the list.

Ubiquiti: Fair

Ubiquiti UniFi management can delete organizational users, but there is no option for temporary lockout. Email alerts to the organizational users can be configured and set to a delayed send time.

How easy is it to invite VPN users?

Netgear Insight Pro: Excellent

VPN users can be invited easily – requiring no technical knowledge, IP address, or other information except the user's email. An email is sent to the requesting user, where a VPN client can be downloaded via a link.

Cisco Meraki: Good

Meraki offers the ability to invite VPN users, but it's not as intuitive and simple as Netgear. Users must be manually added through the Windows VPN setup, which while it isn't difficult to do, it is not as streamlined as an email link to download a client.

Ubiquiti: Good

Setting up VPN requires following the Help Documentation for "UniFi - USG: Configuring L2TP Remote Access VPN". This process was relatively easy, and a connection was confirmed through Window 10 VPN.

1.2 Ease of Navigation

Simplistic navigation through the Graphical User Interface (GUI) to all settings and configurations is necessary for SMB product users. Each solution is rated for the ease of locating and executing management actions.

What is first-time access like?

Netgear Insight Pro: Excellent

Total deployment time: 10 minutes

This process was intuitive and quick. A purchase confirmation email arrives from Netgear, with a registration link and confirmation key. Copy the key and click the link to access the Netgear verification page to paste the key. Then you are prompted with an Account Sign-Up page to enter an email address, password and required fields. Following sign-up, Netgear sends a verification email with a link to verify your email. After that, sign in for access to the Insight Pro Account.

Cisco Meraki: Excellent

First-time access is very easy. The user can enter the portal and begin creating sites quickly. With sites, devices can be assigned, and configurations can easily be set up.

Ubiquiti: Fair

First-time access was simple; an account is created using typical requirements, with the addition of the cloud controller to create sites. Accessing multiple sites across an organization, however, is challenging since Ubiquiti has a site-based management model.

What are views like for administrators and organization users?

Netgear Insight Pro: Excellent

Yes, the administrator has a full view of all organizations, their locations, and settings for each. The organizations are simply laid out with intuitive dropdown menus for detailed control. The organization user can view the organization and, if given sufficient access rights, can see locations and role-specific controls.

Cisco Meraki: Excellent

The administrator can view organization-specific configurations. The organization user sees a similar portal, with resources relative to their access rights.

Ubiquiti: Good

The administrator can view organizations and alter each of their settings. Different sites can be viewed via the "Current Site" dropdown menu, but sites do not have multiple locations.

Is the portal streamlined such that it is intuitive to the end user?

Netgear Insight Pro: Excellent

Insight Pro gives the administrator full control of the SMB. The administrator can see all businesses, and respective users, in a portal and mobile application – outperforming its competitors in terms of simplicity, clarity and resources. The interface is logically set up for easy management, configuration, monitoring, troubleshooting, report viewing and control to ensure the most streamlined setup and use possible. Organization creation is the first step, equipped with a built-in wizard. Having such a straight-forward cloud portal helps administrators and users have a struggle-free, time-saving experience when handling networks and access.

Cisco Meraki: Very Good

The GUI meets useful cloud interface requirements and is fully functional with intuitively split and selectable organizations via tiered dropdown menus. Under each organization is the selection of network-wide, specific device or organizational settings. Each have multiple windows to navigate and alter settings. While the look and feel are not on par with its competitors, its functionality and responsiveness are. All settings can be altered from the cloud GUI and works well.

Ubiquiti: Very Good

The GUI is functional from a control standpoint, with intuitive side tabs to navigate. The top dropdown menu or choosing sites is easy, keeping the administrator updated on site editing. The settings tab has rational categorization and allows the user to turn on beta features. But some tab settings under multi-category tabs may cause confusion to some users. It seems unusual that the controller interface is separate from the sub-controller information, and its overview is in a separate tab from controller options. While look and feel is comparable to its competitors, it uniquely provides responsive behavior and Chrome integration.

Does the product have a useful mobile application?

Netgear Insight Pro: Excellent

Insight Pro can be managed by Android and iOS applications. The administrator, IT manager or business owner have their own rights to manage or view Insight straight from the mobile application. This interface has the same capabilities and functionality, such as adding or managing devices, as the desktop version. The application can be used to add devices manually or using a barcode scan.

Cisco Meraki: Good

Meraki supports a mobile application for both iOS and Android, but not many configuration settings are available through it. The application's capabilities are geared more toward monitoring, with a few built-in tools for basic troubleshooting or device reboot.

Ubiquiti: Good

Ubiquiti supports iOS and Android mobile applications which allow administrative view of different site settings. Most configurations are available to the user. The application is very responsive, quick to update on a computer display, and extremely useful. UniFi's mobile support was straightforward but lacked depth offered by their products.

1.3 Accessibility

The product must be accessible from both local and remote locations.

Are two-factor authentication and secure mobile support available?

Netgear Insight Pro: Excellent

Two-factor authentication is available on both the mobile application and through the cloud portal. Additionally, organization creation always sends an email notification to the person registering the business.

Mobile support is accessible and responsive from the mobile device.

Cisco Meraki: Very Good

Meraki uses text-based two-factor authentication. Users can also access management via a browser on a mobile device; the dashboard operates the same as the computer.

Ubiquiti: Excellent

Ubiquiti uses Google Authenticator for administrator two-factor authentication. Mobile browser support is also available, but the mobile application version is better.

Can the product be accessed via local means (serial, local SSH)?

Netgear Insight Pro: Excellent

Insight Pro devices are manageable in standalone mode via the local GUI, as well as through the Insight Pro platform (cloud portal and mobile application). There is no required hardware license for Netgear devices.

Cisco Meraki: Good

Local login is the device serial number without a password. It can be changed or disabled via network-wide settings in the cloud but cannot be changed locally. In the test use case, there was visibility of the router but not the switch. Viewing the AP required a hardware license, Wi-Fi connection and access of its IP address. The AP also has basic settings and monitoring capability for local connections.

Ubiquiti: Very Good

Some devices have local management available via a browser. The USG-PRO-4 router had basic configuration to connect to the Internet and SSH-based access. The US-8-60W switch was not locally accessible via a browser but could be accessed through SSH if a hardware license was present.

1.4 Management Automation

A successful SMB solution provides features designed to minimize administrative intervention as a cost-saving feature. Similar features provided by the solutions will be assessed for breadth of coverage and usefulness to the administrator, such as alerts and updates.

Are email alerts available for event management?

Netgear Insight Pro: Excellent

Email alerts are sent when a device is offline, when adding or removing devices and if a critical updated is needed. Automated reports are sent through email and do not require email alerts.

Cisco Meraki: Excellent

Alerts were received by configured users only and are available for specific organizations. Selected organizations were set to receive email alerts while others were controlled by global settings. Only the targeted users received the issued email alert.

Ubiquiti: Excellent

Email alerts for the administrator work properly, as observed during the same use case as Netgear and Meraki management.

Can an administrator integrate devices with a centralized SIEM?

Netgear Insight Pro: Excellent

Insight has built-in bandwidth usage, client-connected statistics, SSID creation, VLAN creation, and VLAN port assignment. On the local side, the administrator can see traffic logs and attacks.

Cisco Meraki: Excellent

Meraki can be used to set up SNMP access and syslog servers. Cisco NetFlow is an additional tool option for monitoring and reporting network activity.

Ubiquiti: Fair

While there are not many built-in options available, SNMP information can be sent from devices using manual settings.

Can an administrator create a schedule for updates and ports?

Netgear Insight Pro: Excellent

Insight Pro was observed having the capability to create and update device firmware, as well as create PoE schedules to enable and disable the PoE ports based on the user's need.

Cisco Meraki: Very Good

Meraki allows for automatic install of beta firmware and scheduled ports.

Ubiquiti: Fair

Firmware updates can be scheduled for devices and easily set up via the Schedule Upgrades page in the settings of each site. Updates can further be scheduled per device. PoE scheduling, device access scheduling or related settings were not observed during testing.

2

DEPLOYMENT

2.1 Time to Deploy

2.2 Ease of Deployment

2.3 Depth of Features

2.1 Time to Deploy

Deployment should be easy and only take a few minutes for MSPs supporting multiple SMBs with different locations. The time to deploy similar configurations for each solution was assessed for all locations.

How long to deploy first and second locations?

Netgear Insight Pro: Excellent

Total time required: 10-15 minutes

The purchase confirmation email, with the registration key and link, leads to an intuitive and quick deployment of only 10 minutes. Organizations can be created in under 5 minutes using a built-in wizard through the cloud portal.

For a second deployment, follow the same steps. The dashboard's "+" button prompts for the organization name, business owner name, email address and phone number. With the information in, Insight Pro sends the email invitation to the owner. Once the owner accepts, they are brought to the login page to create a username and password.

Locations can then be added either through the cloud portal or mobile application with one click of "Create Location" within the organization. Locations can be cloned, as discussed in the following section.

Cisco Meraki: Good

Total time required: 10-15 minutes

First-time setup takes an estimated 20 minutes to complete. While a bit more involved and complex than its competition, Meraki offers an abundance of additional option settings. However, product serial numbers and licensing are required.

The next deployment was quicker and comparable to its competition. With the first setup complete, a new network can easily be added onto the organization and settings can be managed there.

Ubiquiti: Very Good

Total time required: 10 minutes

First-time deployment takes 10 minutes, assuming the user account is already created and the only item to be accomplished is device connection.

For the second deployment, the same requirements apply. The second site is treated as a new site like the first, taking the same estimated time. The use of the Chrome auto-discover tool makes device additions as easy as connecting to the local network, logging into the cloud, navigating to the desired site, and adopting the devices.

How easy is it to deploy multiple locations?

Netgear Insight Pro: Excellent

The configuration can be copied to any device of the same kind. The wizard helps find the source and destination of the configuration to be copied. You can add one or more locations from the wizard.

NETGEAR INSIGHT PRO

SG Insight Services Manage

Manage | Copy Configuration

Source Location
Select the source location of the configuration.

Organization: Select Organization
Location: Select Network

Target Organization/Locations
Select one or more target locations to where the configuration is applied.

<input type="checkbox"/> Electronics Repair	—
<input type="checkbox"/> ElecHQ	<input type="checkbox"/> ElecBranch
<input type="checkbox"/> Springfield Gas	+
<input type="checkbox"/> Coffee House	+

Cancel Apply

Cisco Meraki: Excellent

Templates can be created, along with cloning from an existing network. Cloning is easy – after a site is cloned, the devices are added by serial numbers, and the licenses are applied. Settings on the organization level can also be copied to a new organization.

Ubiquiti: Excellent

You can export or import sites in 10-15 minutes.

What time-saving measures are available during deployment?

Netgear Insight Pro: Excellent

Adding new devices can be done in one of three ways: using the serial number, scanning the QR or barcode, or scanning the local network to claim devices. Insight Pro also offers device configuration, backup and saving, or RMA for deployment. Devices can be easily added and removed between locations, and configurations can be copied with just one click.

Cisco Meraki: Very Good

Meraki devices are added via serial numbers and claimed to an organization first, then quickly added to a network using simple checkboxes.

Cloning and template creation are useful in saving time, but there are no observed expedited methods of claiming devices other than the entry of serial numbers.

Ubiquiti: Good

Its auto-detection of devices saves a lot of time. The centralized GUI and setting distribution also make configuration more simplistic.

But some methods for finding and adding devices, such as SSH connection, requires more expertise and is not easy for non-technical MSPs. SSH command and firewall port forwarding is necessary.

2.2 Ease of Deployment

A basic network infrastructure is expected to be easily deployed using each product. The tool(s) available to ease deployment are assessed (e.g. wizards, automation).

Is there a wizard available to guide deployment of new devices?

Netgear Insight Pro: Excellent

There is a wizard for creating organizations, adding locations and adding devices. The mobile application also has this wizard for the same functionality.

Cisco Meraki: Fair

During testing, no wizards or configuration helpers were observed. There are information icons that provide additional details on settings, and there are built-in links between configuration screens – complimentary for specific feature setup.

Ubiquiti: Poor

No wizards for device configurations were observed.

Can licenses be shifted between organizations and physical hardware?

Netgear Insight Pro: Excellent

Insight Pro requires a subscription. When purchasing the subscription, the confirmation key indicates the number of device credits available, along with a corresponding expiration date.

Device credits that are supported under a subscription apply to Insight managed devices only. These can be used on any device as long as they are added to the Insight account.

Cisco Meraki: Poor

Licensing for Meraki products is easily the most arduous of all competitors. Licensing must be split between organizations. These licenses can be reclaimed within 7 days of application, but they otherwise are reallocated by Meraki technical support. Splitting of licenses between organizations – if, for example, the wrong distribution of licenses was ordered for multiple organizations sharing one dashboard key – must be done through Meraki support as well. Licensing seems to be all-inclusive such that the purchase of one license, all features are included. No additional licenses are needed for VPN.

Ubiquiti: Poor

Licensing is accomplished via device count (hosted cloud) or hardware capability (cloud key). This allows devices to be easily transferred between sites – however, there is no ability to transfer licenses between organizations.

What kind of steps are required for hardware reallocation?

Netgear Insight Pro: Excellent

In terms of hardware, Netgear uses its device credit model. You can simply delete a device and add that to a separate organization.

Cisco Meraki: Excellent

Hardware can be moved between organizations by going to the Organization Inventory, unclaiming the device, then claiming it in another organization. Serials can be copied and pasted. The device can be removed and added between networks.

Ubiquiti: Very Good

Hardware can be easily moved between organizations by using the "Forget" option for hardware from a site, then adding it to the other site. If there is any additional issue, the factory reset button allows hardware to be reset and added to the new location.

How easy is it to set up Site-to-Site VPN?

Netgear Insight Pro: Excellent

Like setting up a VPN client, as discussed earlier in Section 1.1, Netgear allows easy creation of site-to-site VPNs and invites remote VPN users with no required technical knowledge. Users are invited via email, where they download a VPN client using the provided link. This set up is easy and can be done by a user with any level of expertise.

Cisco Meraki: Good

Site-to-site VPN setup is doable but is a bit more complex than its competitors. Where Netgear uses a simple connection through a VPN client, Meraki requires more setting changes and the decision about whether to use a hub or spoke setup. This took a little more expertise, but a successful connection was observed after setting both sites to hub and turning on.

Ubiquiti: Very Good

After ensuring both sites were not assigned to the same local subnet, site-to-site VPN connection was made as easily as adding location in the dropdown menu and naming it. Required settings are created automatically after pressing the Create Network button.

2.3 Depth of Features

The SMB product requires a capable feature set to allow for diverse deployment options when managing multiple organizations with different needs. The relative feature sets are compared between solutions (e.g. VPN, guest access, security options).

What kind of feedback is provided by the centralized dashboard?

Netgear Insight Pro: Excellent

Netgear has the most user-friendly design when compared to Cisco Meraki and Ubiquiti. The dashboard has abundant features that are easy to find and use. It shows how many organizations are created in big blocks with the main information needed below. From here, the administrator can browse any organization and its locations. You can manage devices, listed by name, serial, number of clients, type and the organization/location it belongs to. Under Manage > Reports, you can see a list of reports, with notes, schedule, and creation timestamp. All managers can be seen, listed with their email, the number of organizations and the Access Policy (read/write permissions). Insight Pro allows users to create and customize automated weekly or monthly reports.







Cisco Meraki: Excellent

The dashboard has a sleek design and is easy to navigate. the tiered dropdown menus offer a simplistic way to delve into each organization's network(s), then into organization devices. The design is smooth and easier to navigate than Ubiquiti; it has an intuitive tiered setup.

Ubiquiti: Very Good

The Ubiquiti UniFi dashboard has a solid setup, with relevant color-coded system status information for the administrator. While not as intuitively tiered like Meraki and Netgear, it does show a good deal of information – throughput, latency, Wi-Fi devices and clients, DPI statistics and device statuses. However, color coding may be hard to decipher for a red-green colorblind user.

Device Features and Report Generation

Devices					
Device Name	Serial	Clients	Type	Organization	Location
 5JR1885D00626	5JR1885D00626	NA	Router	Electronics Repair	ElectBranch
 BR500	5JR1885800338	NA	Router	Electronics Repair	ElectHQ
 nas-43-RegionSE	4XL175EC003FB	NA	NAS	Electronics Repair	ElectHQ
 Netgear43138F	4XU179EN00268	1	Access Point	Gas	Location_1
 Netgear436C8F	4XU179EW0052E	0	Access Point	Coffee House	Coffee House_Location
 switch1_4WS17A7K80251	4WS17A7K80251	NA	Switch	Electronics Repair	

Source: Miercom – Netgear Insight Pro

Reports			X
Report Name	Generated On		
miercom test-2019-02-07	07 Feb, 2019 12:37 pm	View Download	
miercom test-2019-02-07	07 Feb, 2019 12:37 pm	View Download	
miercom test-2019-02-07	07 Feb, 2019 12:37 pm	View Download	
			OK

Source: Miercom – Netgear Insight Pro

When viewing or downloading a report as an administrator, you can see the number of devices, number of unique clients, the total data usage, whether free storage is available and the number of locations.

On the same page, it shows the Top 5 NAS Devices and Top 5 APs. For each organization, there are graphics depicting data consumption and PoE power usage, along with Critical Alerts. The following page shows the Last 10 Configuration changes; the next page shows the Last 20 Configuration changes; and finally, the next page shows All Configuration Changes. Following this you can see the Top 5 Wi-Fi Clients, download/uploads, system health, and device and firmware status.

Are some features not included in the standard license?

Netgear Insight Pro: Very Good

The standard Insight Pro subscription applies to all devices, which all work in standalone mode (visible in the GUI). No product licenses are required – even if Insight Pro subscription expires. Devices will not become disconnected. We saw this as a unique product strength differentiator. Only VPN requires additional licensing.

Cisco Meraki: Very Good

It appears that with the purchase of a product license, the dashboard and cloud management are included. All device features used in testing were available through the device licenses acquired. It has not been confirmed that devices remain connected without licensing, as with Netgear.

Ubiquiti: Good

The standard license was observed to include all features without the need for additional licensing. But it does not include the same level of technical support as the other vendors. For live help, a premium subscription is required for an additional \$10 a month. It has not been confirmed that licenses remain connected without licensing, as with Netgear. The mobile application did not support all features.

3

REPORTING

3.1 Active Logging

3.2 Reporting

3.1 Active Logging

The management solution should monitor, record and store the activity of all applications, content, users and devices across the network.

How does logging benefit the administrator/user?

Netgear Insight Pro: Excellent

Netgear offers the most straightforward, yet rich, view of information that is unmatched by its competitors. From Insight Pro, the administrator has visibility to organizations, locations, devices status, wireless settings (access points, SSID, client connections to access points, configurations, bandwidth), wired settings (VLAN, PoE scheduling, LAG), storage, and firewall updates for any location.

A business owner has access to this same information for the individual site location.

Cisco Meraki: Good

Meraki GUI logs display an event log and system log. The event log is split into views by MSP, organization and network. The per-network event log shows events by device type.

The user can also view his or her specific organization. Detailed event logs are available for per-network (for user) and per-organization (for administrator) as an audit trail. While specific device logs can be found via links, these links are not always functional.

Logs can be searched using criteria such as time, location, organization and more.

Ubiquiti: Fair

There is a network event log to show devices status, but there was no audit log observed. Additionally, there is no capability to export logs to .CSV format.

As for the user, this functionality was not observed as a consequence of the inability to add users. While the settings to add a user exist, they could neither be validated during the time of testing nor resolved by the standard technical support package.

Detailed information was not available via links, but logs were able to be filtered and searched.

3.2 Reporting

The product should provide both standardized reports for out-of-the-box operation, as well as custom report options. Reports should allow users to view activity and analyze for remediation.

Can an administrator support automated or manual reports?

Netgear Insight Pro: Excellent

A wizard can create a customized report about locations, device status and firmware updates. Reports can be run as needed, either on a one-time basis or scheduled through automation.

Cisco Meraki: Very Good

Automated reports are supported but not manual ones. Reports can be exported to .CSV, and all reports can be customized.

Ubiquiti: Poor

Automated and manual report creation is not supported. Reports are not customizable.

Can the administrator provide alerts based on organizations?

Netgear Insight Pro: Excellent

Insight Pro allows for push notifications for the mobile application or an email update to any organization specified.

Cisco Meraki: Excellent

Alerts are split by organization. Managers only receive alerts for organizations that they control.

Ubiquiti: Very Good

All organizations receive the same alerts.

4

PRODUCT SUPPORT

4.1 Product Support Documentation

4.1 Product Support Documentation

This section covers the analysis of help and support documentation provided by the manufacturer for both administrator and end user.

Does the GUI have links to relevant help content?

Netgear Insight Pro: Excellent

The GUI uses a "?" link to provide relevant help documentation to administrators and users. Under Account > Support is a page where you can enter the model number or product name, or you can browse from a category for the product model as shown in the figure below.

Insight Pro offers: product, phone, chat, email and online community support.

Cisco Meraki: Very Good

There are some links throughout, such as "Read More" to help accomplish tasks. There are no "?" icons, but a dropdown menu gives access to documentation, to community help, use cases, features and more.

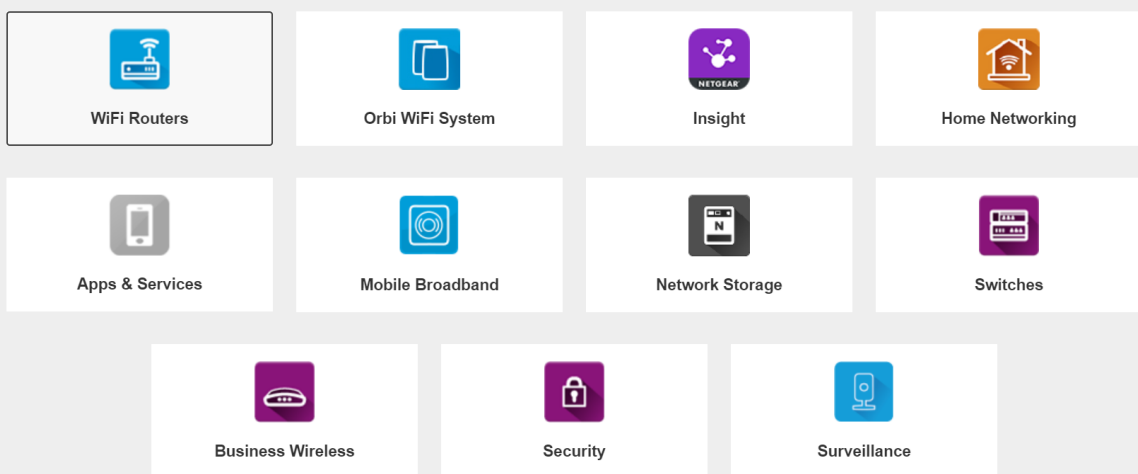
Article links, when available, have thorough descriptions and clarification in these articles. Meraki has a depth of knowledge and options.

Ubiquiti: Good

There are not many help links available. While there is a help chat option in the bottom-left of the screen, it takes 10-20 minutes to get live help. They supply good Tier 1 support and notify you if the problem requires Tier 2 support. Help answers basic questions (e.g. latest controller version).

Related articles are linked at the bottom of the page. There are a few links built into each support document. Documents are very thorough.

Select a category below to browse for your product model



Source: Miercom – Netgear Insight Pro

Are there video guides available for using and configuring devices?

Netgear Insight Pro: Excellent

After finding the product model, you are brought to a page of multiple product support videos to choose from.

Cisco Meraki: Excellent

Meraki publishes YouTube videos to guide configurations by product series, but it requires some high-level expertise.

Ubiquiti: Good

Some YouTube videos are published by Ubiquiti which are mostly webinars. Not many videos cover how to configure, but there are overview videos that are useful for architecture nuances or specific tasks.

How long does it take to establish support calls?

Netgear Insight Pro: Excellent

Phone support use cases each took about 10 minutes for a representative to ask for the ID and purchase date. There was one transfer to the Insight Pro specialist who requested to remote access. During this time, he updated the router and NAS. He was very knowledgeable and helpful.

Phone service is free for 90 days; it is complimentary with each device purchase.

Cisco Meraki: Good

Calls took 10 minutes to reach a representative. There were no transfers needed, and after five minutes the representative found the issue, offered a solution and confirmed resolution.

Ubiquiti: Fair

No calls are supported, unless you have the Elite Customer package which is only available for purchase from distributors. If pushed, a TeamViewer session may be possible.

5

TCO

5.1 Total Cost of Ownership (TCO)

5.1 Total Cost of Ownership (TCO)

This TCO analysis reflects the costs of purchasing a deployment of 10 access points with respective hardware, cloud management and corresponding license subscriptions.

Miercom Cost Analysis

To begin this analysis, we looked at the pricing for this deployment scenario. We calculated the cost of switches, routers, access points and appropriate licensing for each vendor. The sums of costs are listed in the table below. Netgear's total cost was the lowest when compared to its competitors.

Netgear Cost of First-Year Deployment	
Item	Price
1 x GC110P (Switch)	\$ 186.00
2 x BR500 (Router)	520.00
10 x WAC505 (Access Point)	451.00
Annual subscription	200.00
TOTAL: \$ 1,357	

Cisco Meraki Cost of First-Year Deployment	
Item	Price
10 x MR20 (Access Point) + 1-Year License	\$ 6990.00
1 x MS120-8LP-H (Switch) + 1- Year License	945.00
2 x MX64 (Router) + 1-Year License	1790.00
TOTAL: \$ 9,725	

Ubiquiti Cost of First-Year Deployment	
Item	Price
10 Device License	\$ 300.00
1 x UC-CK (Cloud Key)	90.00
10 x AP AC LITE (Access Point)	780.00
1 x US-8-60W (Switch)	115.00
2 x USG-PRO-4 (Router)	600.00
TOTAL: \$ 1,885	

6 - About Miercom

Miercom has published hundreds of network product analyses in leading trade periodicals and other publications. Miercom's reputation as the leading, independent product test center is undisputed.

Private test services available from Miercom include competitive product analyses, as well as individual product evaluations. Miercom features comprehensive certification and test programs including: Certified Interoperable, Certified Reliable, Certified Secure and Certified Green. Products may also be evaluated under the Performance Verified program, the industry's most thorough and trusted assessment for product usability and performance.

7 - Use of This Report

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